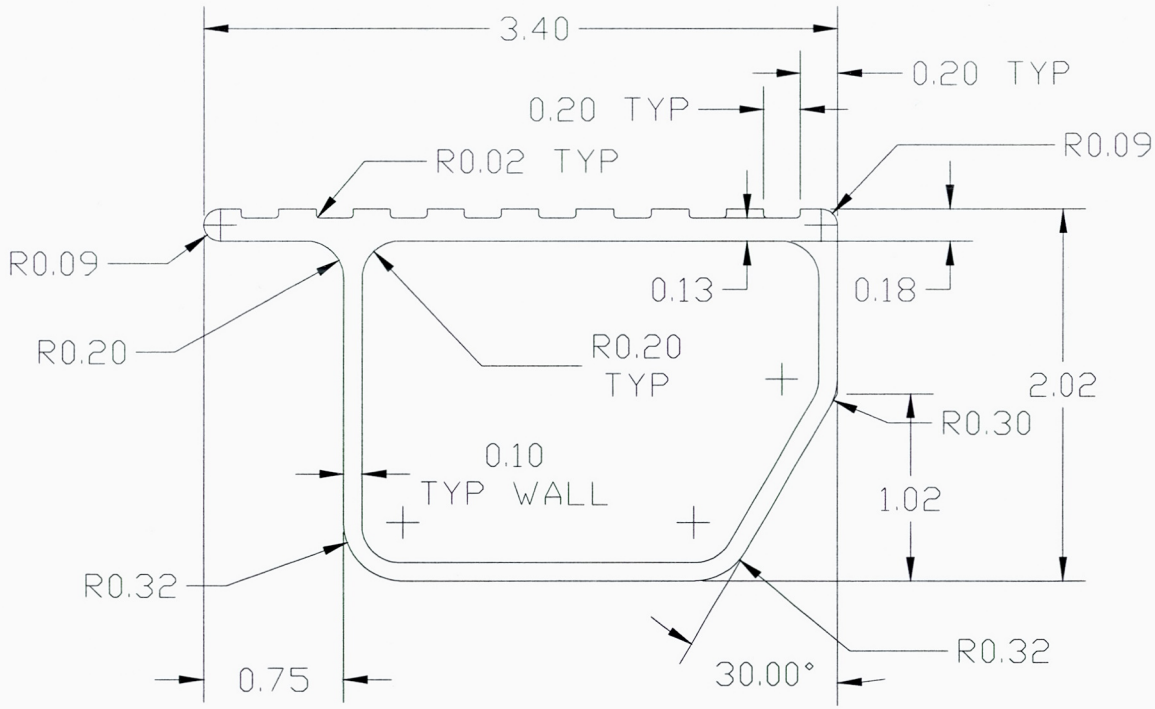
REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		07/02/08



NOTES

1. REFERENCE DRAWING - PROFILE AND MATERIAL DESCRIPTION ONLY LENGTH AND OTHER FEATURES TO BE DETAILED ON DRAWINGS USING THIS REFERENCE.

QTY	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE
1	78230	01	STEP EXTRUSION PROFILE	ALUM 6061-T6		
01						

LIST OF MATERIALS

-- NOTICE --
THIS DRAWING CONTAINS INFORMATION AND DATA WHICH IS PROPRIETARY TO AERO DESIGN LTD. THIS DRAWING, OR ANY PORTION THEREOF, MAY NOT BE REPRODUCED, COPIED, OR DUPLICATED IN ANY MANNER, NOR USED FOR MANUFACTURING WITHOUT THE WRITTEN CONSENT OF AERO DESIGN LTD. BY ACCEPTING THIS DRAWING FOR REFERENCE, THE RECIPIENT AGREES TO HOLD AERO DESIGN LTD. HARMLESS FROM THE USE, OR MISUSE, OF THIS DRAWING OR THE INFORMATION CONTAINED THEREIN.

APPROVALS		DATE
DRAWN:	R. RATHWELL	07/02/08
CHECKED:	E. BURGOIN	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES ON:

DECIMALS		ANGLES
X.XXX	±0.010	±1/2°
X.XX	±0.03	
X.X	±0.1	

AERO DESIGN LTD.
CONSULTING ENGINEERS, TRANSPORT CANADA APPROVALS, DAR 290M
2013 - 39TH AVENUE N.E., CALGARY, ALBERTA, CANADA, T2E 6R7
tel: (403) 250-8027 fax: (403) 250-8333 www.aerodesign.ca

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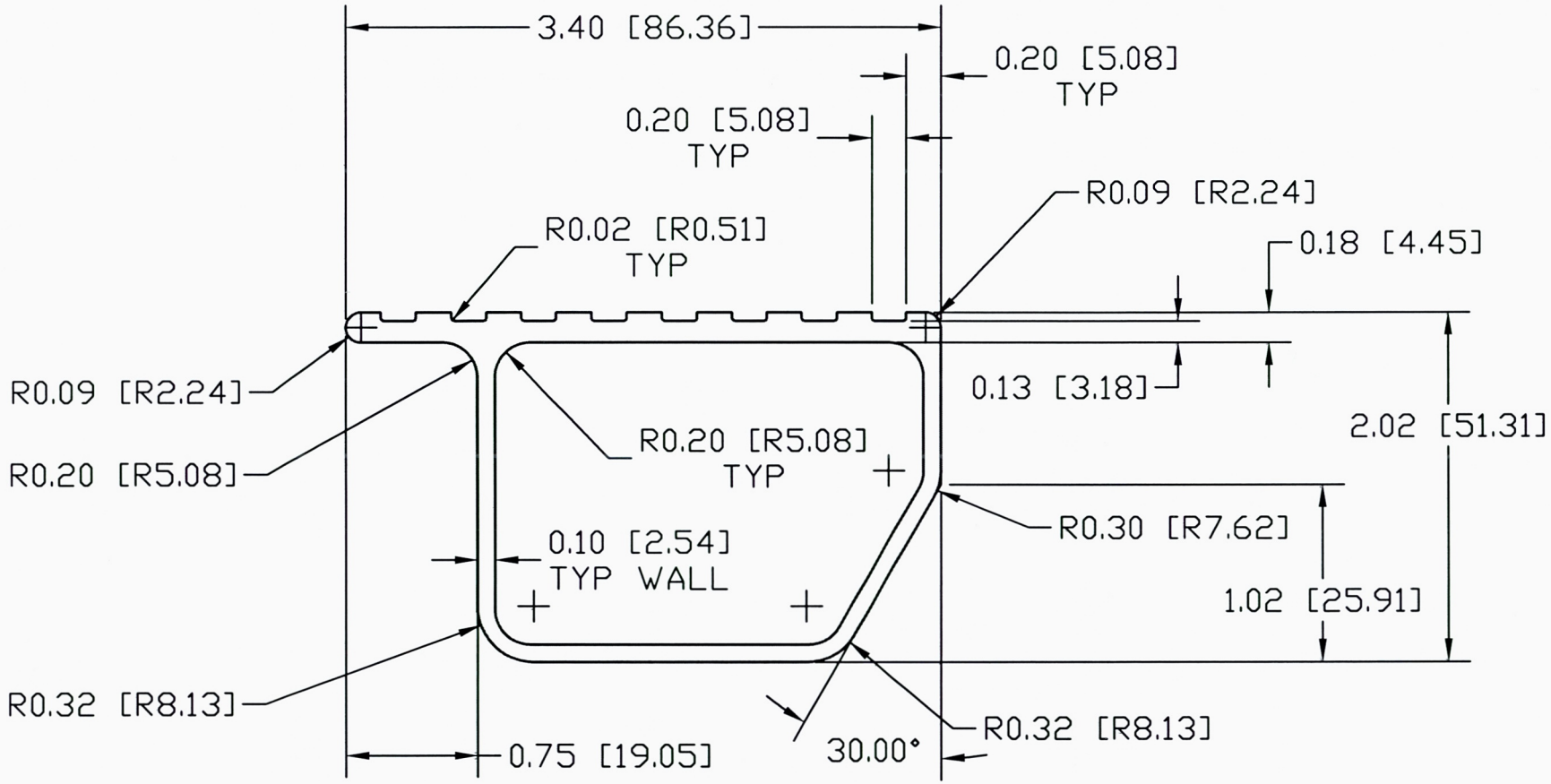
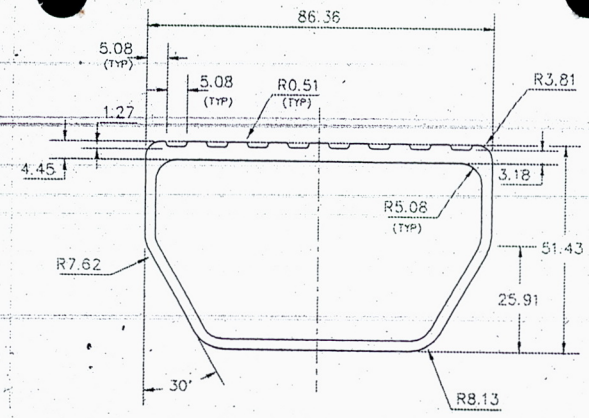
STEP EXTRUSION
PROFILE GEOMETRY

SCALE 1 : 1	DWG. SIZE	DWG. NO.	REV.
SHEET 1 OF 1	A4	78230	0



Step Extrusion-Modified_1

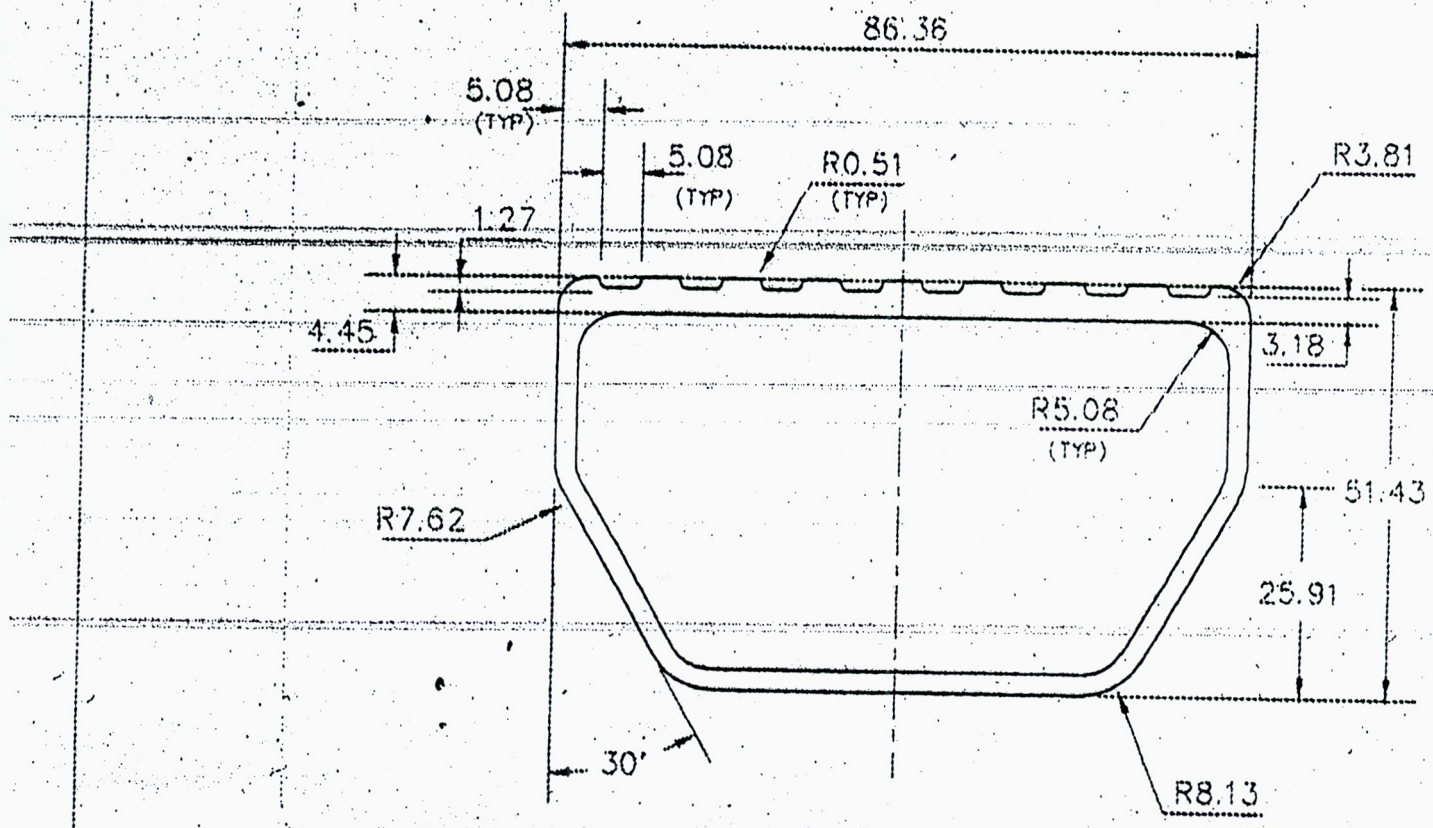
EXPOSED ALL AROUND



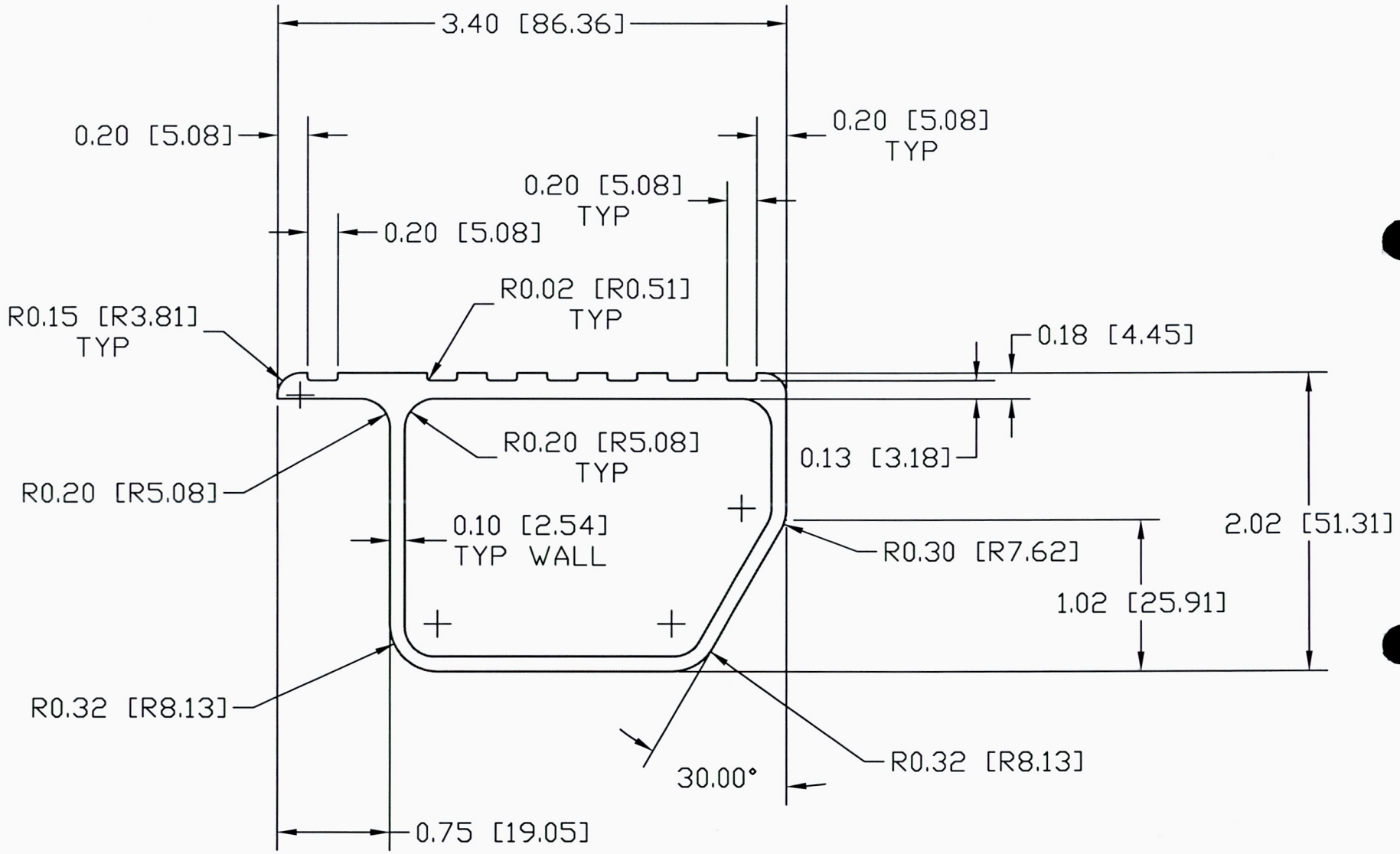
ACTUAL SIZE

Caradon Indalex			PRELIMS ☐ WT ☐ PC	CHECKING GAUGES ☐ YES ☐ NO	LIN REFERENCE ☐ YES ☐ NO
			INT SIZE 10 x 5.5	INT	INT LOC
WALL THICKNESS 0.100 IN 2.54 MM	EXCEPT AS SHOWN		BACKER SIZE	FEEDER SIZE	
EST. AREA 1.122 IN² 723.90 MM²	OUT PER. 10.308 IN 261.83 MM		BACKER NO.	FEEDER NO.	
EST. WT. 1.346 LBS/FT 1.963 KG/M	FACTOR 14 / 248		BACKER LEN	FEEDER LEN	
EST. PER. 19.188 IN 487.38 MM	C.C.D. 3.487 IN 88.57 MM		BOLSTER NO. C1662	BOLSTER LOC. C9	CAV. 1
DWN BY	ALLOY 6061-T6	SCALE 1:1	DATE 97/9/11	PRESS NO 2	CONT'P 188	EXT RATIO 38
BREAK ALL CORNERS .010"R (0.25R) UNLESS OTHERWISE NOTED.				STANDARD TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED	

EXPOSED ALL AROUND



ACTUAL SIZE



step extrusion-modified_Ø

Invoice / Facture

INDALEX
ALUMINUM SOLUTIONS
A division of Indalex Limited

Please Remit to/A Remettre à:
P.O. Box 6447
Station Terminal
Vancouver, BC
V6B 6R3
p: 1-866-213-2084 f: 1-866-245-2538

Shipped Date / Date d'Expédiée	Order No / No de Commande	Date	INVOICE NO.
2008/03/25	8021878	2008/03/25	925935 P. 1

Aluminum Extrusions - Anodizing - Fabrication - Painting

Sold to / Vendu à

AERO DESIGN LTD.
2013 - 39TH AVENUE N.E.
CALGARY, ALBERTA

T2E6R7
ALT

Ship to / Expédié à
Same unless otherwise noted

Cust No / No de Client		Cust Ord No/No Comm Client	Terms / Conditions	Packing Slip / Bon de Liv.
64032	XXXXXXXXXX	8017	Net 30 Days	650494

Salesrep/Vendeur	PST No / No du TVP	Order Date/Date de Com	Our Dte/Notre Dte	FOB/FAB	Ship Via / Expédié par
46	0%	8/02/15	8/02/15	05	STINGRAY

TPS/GST: R136834041

Item No / No Item	Ordered Weight / Commandé Poids	Ordered Pieces / Commandé Pieces	Sls Code / Code Vente	Indalex Die No / Matrice d'Indalex	Alloy Temper / Alliage Trempage	Length / Longueur	Unit Price / Prix Unitaire	UM	This Shipment Lin Qty / Com Qty	Bdls / Lin	Weight / Bal	Pieces / Poids	Pieces / Piec	Amount / Montant
1	6	2		VH60078	6005AT61	1524			1		6		2	
			11	EXTRUSION			.0001	PC						.00
			HELICOPTER STEP EXTR											
			SUB-TOTAL											----------

Interest charges at 2% per month or 24% per annum on past due / Les taux d'intérêts sont de 2% par mois ou 24% annuellement sur factures en retard

Total Amount / Montant Total CND DOLLARS .00

Heli-Access-Step™

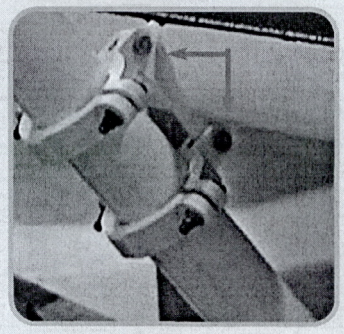
Bell 206/407/OH-58

Step right up, Ladies and Gentlemen!

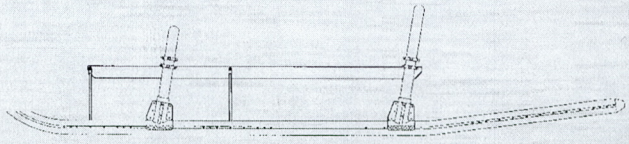
DART stepped up to the challenge in designing the *Heli-Access-Step™* for Bell, Eurocopter and Agusta aircraft.

DART recognized the industry need for lightweight steps that are strong and functional — steps you can depend on. ***DART*** steps are now standard equipment on new aircraft. ***DART*** offers a variety of steps for most types of aircraft.

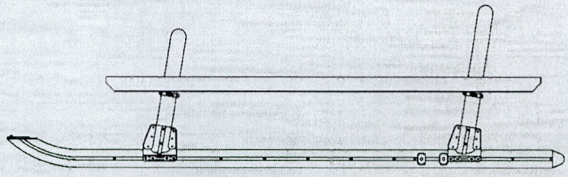
DART steps for the Bell 206, 407 and OH-58 are torsionally stiffer than other steps on the market. There will be no more rolling or rotating with these steps! They install on the crosstubes with a unique duplex clamping system that self-locks when weight is applied to prevent the step from slipping. Not only does the dual clamping system make installation a breeze, it also simplifies removal for inspection. And for even greater versatility, try our quick release pip pin kit.



Unique, secure clamping system



D206-628-013/-014



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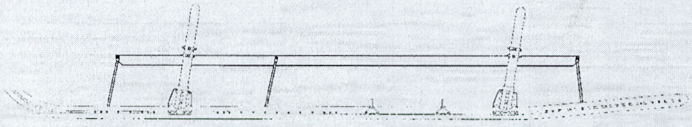

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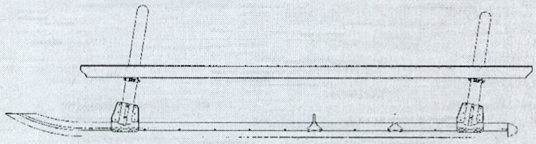

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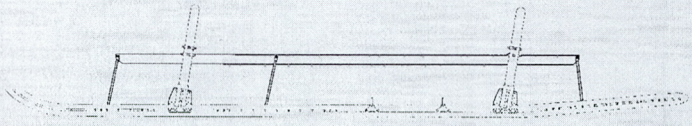

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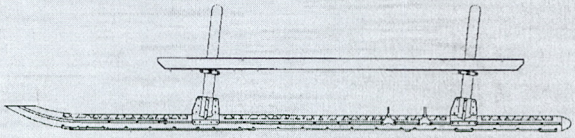
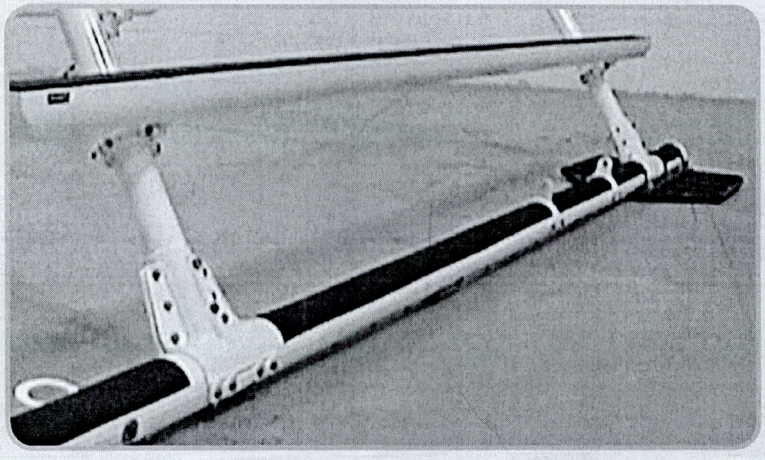


D058-677-011/-012/-013/-014



D206-628-021/-022

Heli-Access-Step™

Bell 206/407/OH-58

Heli-Access-Step™

APPROVAL	STC NUMBER	A/C APPROVED	STC DESCRIPTION
Canada	SH98-14	206A/B/L/L1/L3/L4/407	*Heli-Access-Step™*
USA	SA00500SE	206A/B/L/L1/L3/L4/407	*Heli-Access-Step™*
USA	SR00915SE	OH-58A/A+/C	*Heli-Access-Step™*

New approvals are continually being added; if you do not see your required approval, contact your DART sales office to verify the status.

PART NUMBER	PRODUCT DESCRIPTION	KIT WEIGHT	INSTALLATION TIME
D206-628-011	*Heli-Access-Step™* LH 206A/B	7.56 lb / 3.43 kg	2 hrs
D206-628-012	*Heli-Access-Step™* RH 206A/B	7.56 lb / 3.43 kg	2 hrs
D206-628-013	*Heli-Access-Step™* LH 206A/B	7.83 lb / 3.55 kg	2 hrs
D206-628-014	*Heli-Access-Step™* RH 206A/B	7.83 lb / 3.55 kg	2 hrs
D206-628-021	*Heli-Access-Step™* LH 206L/L1/L3/L4	9.79 lb / 4.44 kg	2 hrs
D206-628-022	*Heli-Access-Step™* RH 206L/L1/L3/L4	9.79 lb / 4.44 kg	2 hrs
D206-628-023	*Heli-Access-Step™* LH 206L/L1/L3/L4	11.66 lb / 5.29 kg	2 hrs
D206-628-024	*Heli-Access-Step™* RH 206L/L1/L3/L4	11.66 lb / 5.29 kg	2 hrs
D206-628-031	*Heli-Access-Step™* LH 407	9.79 lb / 4.44 kg	2 hrs
D206-628-032	*Heli-Access-Step™* RH 407	9.79 lb / 4.44 kg	2 hrs
D206-628-033	*Heli-Access-Step™* LH 407	11.66 lb / 5.29 kg	2 hrs
D206-628-034	*Heli-Access-Step™* RH 407	11.66 lb / 5.29 kg	2 hrs
D058-677-011	*Heli-Access-Step™* LH OH-58	7.80 lb / 3.55 kg	2 hrs
D058-677-012	*Heli-Access-Step™* RH OH-58	7.80 lb / 3.55 kg	2 hrs
D058-677-013	*Heli-Access-Step™* LH OH-58	7.80 lb / 3.55 kg	2 hrs
D058-677-014	*Heli-Access-Step™* RH OH-58	7.80 lb / 3.55 kg	2 hrs

PART NUMBER	PRODUCT DESCRIPTION	SPECIAL COMMENTS	AIRCRAFT MODEL	PRICE
D206-628-011	***Heli-Access-Step™***	**LH - High gear. Pip pin option available.** Price is per side	**206A/B**	**$1,390.00**
D206-628-012	*Heli-Access-Step™*	RH - High gear. Pip pin option available. Price is per side	206A/B	$1,390.00
D206-628-013	***Heli-Access-Step™***	**LH - Float Compatible. Pip pin option available. OEM & Kwik float compatible** Price is per side	**206A/B**	**$1,390.00**
D206-628-014	*Heli-Access-Step™*	RH - Float Compatible. Pip pin option available. OEM & Kwik float compatible Price is per side	206A/B	$1,390.00
D206-628-021	***Heli-Access-Step™***	**LH - High gear. Pip pin option available.** Price is per side	**206L/L1/L3/L4**	**$1,531.00**
D206-628-022	*Heli-Access-Step™*	RH - High gear. Pip pin option available. Price is per side	206L/L1/L3/L4	$1,531.00
D206-628-023	***Heli-Access-Step™***	**LH - Float Compatible. Pip pin option available.** Price is per side	**206L/L1/L3/L4**	**$1,531.00**
D206-628-024	*Heli-Access-Step™*	RH - Float Compatible. Pip pin option available. Price is per side	206L/L1/L3/L4	$1,531.00
D206-628-031	***Heli-Access-Step™***	**LH - High gear. Pip pin option available.** Price is per side	**407**	**$1,531.00**
D206-628-032	*Heli-Access-Step™*	RH - High gear. Pip pin option available. Price is per side	407	$1,531.00
D206-628-033	***Heli-Access-Step™***	**LH - Float Compatible. Pip pin option available.** Price is per side	**407**	**$1,531.00**
D206-628-034	*Heli-Access-Step™*	RH - Float Compatible. Pip pin option available. Price is per side	407	$1,531.00
DSI 9235-011	**Quick Release Pip Pin Kit**	**Compatible with all D206-628 steps.** Price is per step	**206A/B/L/L1/L3/L4/407**	**Contact Sales**
D058-677-011	*Heli-Access-Step™*	LH - High gear. Compatible with Aft crosstube p/n 206-052-109-3 (outside diameter 2.25) or equivalent. Price is per side	OH-58A/A+/C	$1,339.00
D058-677-012	***Heli-Access-Step™***	**RH - High Gear. Compatible with Aft crosstube p/n 206-052-109-3 (outside diameter 2.25) or equivalent.** Price is per side	**OH-58A/A+/C**	**$1,339.00**
D058-677-013	*Heli-Access-Step™*	LH - High gear. Compatible with Aft crosstube p/n 058-321-102 & 602-058-001 (outside diameter 2.5) or equivalent. Price is per side	OH-58A/A+/C	$1,339.00
D058-677-014	***Heli-Access-Step™***	**RH - High Gear. Compatible with Aft crosstube p/n 058-321-102 & 602-058-001 (outside diameter 2.5) or equivalent.** Price is per side	**OH-58A/A+/C**	**$1,339.00**

DART helicopter services

Heli-Access-Step™ Bell 204/205/210/212/214/412/UH-1

These steps for Bell medium aircraft (204/205/210/212/214/412/UH-1) attach to fuselage hardpoints. They're available in fixed and folding options, as well as for standard and extended height landing gear. They split the height difference between the aircraft floor and the ground.

Low maintenance and approved to be flown deployed or stowed

- ***Heavy duty / folding / fixed***
- ***Simplex / Isolair Tank compatible / OEM & Apical float compatible***
- ***Compatible on low / high / extended height gear***

FOR CURRENT PRODUCT OFFERINGS VISIT ***WWW.DARTHELICOPTERSERVICES.COM***

Heli-Access-Step™ Bell 204/205/210/212/214/412/UH-1

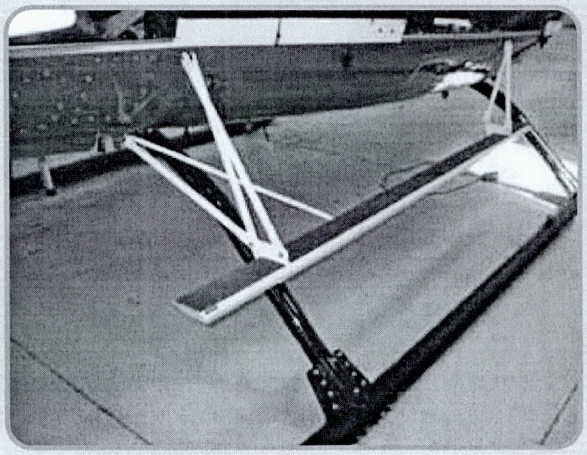
HELI-ACCESS-STEP™

APPROVAL	STC NUMBER	A/C APPROVED	STC DESCRIPTION
Canada	SH91-40	204B	*Heli-Access-Step™* D204-618
USA	SR00505NY	204B	*Heli-Access-Step™* D204-618
Canada	SH96-57	205A/205A1/205B/212/214B/ 214B1/412/412CF/ 412EP	*Heli-Access-Step™* D205-633
USA	SR00592NY	214B/214B1	*Heli-Access-Step™* D205-633
USA	SR00593NY	205A/205A1/205B	*Heli-Access-Step™* D205-633
USA	SR00594NY	212/412/412CF/412EP/AB412/AB412EP	*Heli-Access-Step™* D205-633
Germany	RC 1182	205A1/212/214B/214B1/412	*Heli-Access-Step™* D205-633
Canada	SH96-69	205A/205A1/205B/212/214B/ 214B1/412/412CF/ 412EP	*Heli-Access-Step™* D412-630
USA	SR00595NY	205A/205A1/205B	*Heli-Access-Step™* D412-630
USA	SR00597NY	214B/214B1	*Heli-Access-Step™* D412-630
USA	SR00598NY	212/412/412CF/412EP/AB412/AB412EP	*Heli-Access-Step™* D412-630
Japan	STC-112-1-TYO	212/412/412EP	*Heli-Access-Step™* D412-630
EASA	EASA.IM.R.S.01204	205A/205A1/205B/212/214B/214B1/412/412EP	*Heli-Access-Step™* D412-630

New approvals are continually being added; if you do not see your required approval, contact your DART sales office to verify the status.

PART NUMBER	PRODUCT DESCRIPTION	KIT WEIGHT	INSTALLATION TIME
D204-618-011	*Heli-Access-Step™* high gear	10.60 lb / 4.82 kg	3 hrs
D205-633-011	*Heli-Access-Step™* high gear	14.00 lb / 6.35 kg	3 hrs
D205-633-013	*Heli-Access-Step™* 31" gear Isolair Tank Compatible	14.30 lb / 6.49 kg	3hrs
D205-633-015	*Heli-Access-Step™* 39" gear Isolair Tank Compatible	15.00 lb / 6.80 kg	3hrs
D205-633-017	*Heli-Access-Step™* low gear	13.70 lb / 6.21 kg	3hrs
D205-633-021	*Heli-Access-Step™* LH high gear, Simplex Tank Compatible	14.00 lb / 6.35 kg	3 hrs
D205-633-022	*Heli-Access-Step™* RH high gear, Simplex Tank Compatible	13.20 lb / 6.00 kg	3hrs
D205-633-023	*Heli-Access-Step™* LH 31" gear, Simplex Tank Compatible	14.30 lb / 6.49 kg	3hrs
D205-633-024	*Heli-Access-Step™* RH 31" gear, Simplex Tank Compatible	13.50 lb / 6.14 kg	3hrs
D205-633-025	*Heli-Access-Step™* LH 39" gear, Simplex Tank Compatible	14.60 lb / 6.64 kg	3hrs
D205-633-026	*Heli-Access-Step™* RH 39" gear, Simplex Tank Compatible	13.80 lb / 6.27 kg	3hrs
D412-630-011	*Heli-Access-Step™* LH heavy duty, folding	16.10 lb / 7.30 kg	3hrs
D412-630-012	*Heli-Access-Step™* RH heavy duty, folding	16.10 lb / 7.30 kg	3hrs
D412-630-033	*Heli-Access-Step™* LH folding	13.50 lb / 6.12 kg	3hrs
D412-630-034	*Heli-Access-Step™* RH folding	13.50 lb / 6.12 kg	3hrs
D412-630-111	*Heli-Access-Step™* LH, heavy duty, fixed	14.60 lb / 6.62 kg	3hrs
D412-630-112	*Heli-Access-Step™* RH, heavy duty, fixed	14.60 lb / 6.62 kg	3hrs

See next 2 pages for pricing

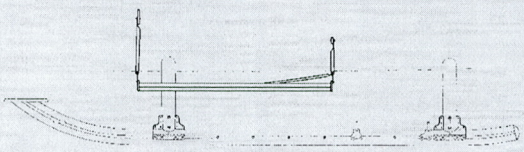


D205-633-023

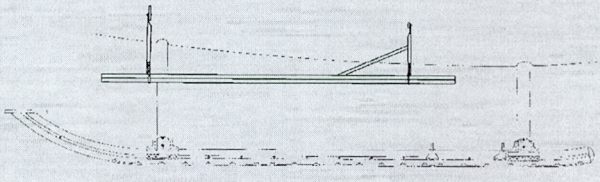
DART helicopter services

Heli-Access-Step™ Bell 205/210/212/214/412/UH-1

PART NUMBER	PRODUCT DESCRIPTION	SPECIAL COMMENTS	AIRCRAFT MODEL	PRICE
D204-618-011	***Heli-Access-Step™*** **(Fits LH or RH)**	**High gear. Mounts to fuselage STA 74.25 & 123** Price is per side	**204**	**$2,175.00**
D205-633-011	*Heli-Access-Step™* (Fits LH or RH)	High gear. Mounts to fuselage at STA 63 & STA 129. Rated for 500 lb in flight. Price is per side	205/210/212/214/412/UH-1	$2,175.00
D205-633-013	***Heli-Access-Step™*** **(Fits LH or RH) 31" Extended Height Gear** Isolair Tank Compatible	**31" extended height gear. Mounts to fuselage at STA 63 & STA 129. Compatible with Isolair Tanks. Rated for 500 lb in flight.** Price is per side	**205/210/212/214/UH-1**	**$2,525.00**
D205-633-015	*Heli-Access-Step™* (Fits LH or RH) 39" Extended Height Gear Isolair Tank Compatible	39" extended height gear. Mounts to fuselage at STA 63 & STA 129. Compatible with Isolair Tanks. Rated for 500 lb in flight. Price is per side	205/210/212/214/UH-1	$2,525.00
D205-633-017	***Heli-Access-Step™*** **(Fits LH or RH) Low Gear**	**Low gear. Mounts to fuselage at STA 63 & STA 129. Rated for 500 lb in flight.** Price is per side	**205/210/212/214/412/UH-1**	**$2,195.00**
D205-633-021	*Heli-Access-Step™* LH High Gear Simplex Tank Compatible	High gear. Mounts to fuselage at STA 63 & STA 129. Rated for 500 lb in flight. Simplex Model 304 Fire Attack Tank Compatible. Price is per side	205/210/212/214/412/UH-1	$3,295.00
D205-633-022	***Heli-Access-Step™*** **RH High Gear** Simplex Tank Compatible	**High gear. Mounts to fuselage at STA 63 & STA 129. Rated for 500 lb in flight. Simplex Model 304 Fire Attack Tank Compatible.** Price is per side	**205/210/212/214/412/UH-1**	**$3,295.00**
D205-633-023	*Heli-Access-Step™* LH 31" Extended Height Gear Simplex Tank Compatible	31" extended height gear. Mounts to fuselage at STA 63 & STA 129. Rated for 500 lb in flight. Simplex Model 304 Fire Attack Tank Compatible. Price is per side	205/210/212/214/UH-1	$3,295.00
D205-633-024	***Heli-Access-Step™*** **RH 31" Extended Height Gear** Simplex Tank Compatible	**31" extended height gear. Mounts to fuselage at STA 63 & STA 129. Rated for 500 lb in flight. Simplex Model 304 Fire Attack Tank Compatible.** Price is per side	**205/210/212/214/UH-1**	**$3,295.00**
D205-633-025	*Heli-Access-Step™* LH 39" Extended Height Gear Simplex Tank Compatible	39" extended height gear. Mounts to fuselage at STA 63 & STA 129. Rated for 500 lb in flight. Simplex Model 304 Fire Attack Tank Compatible. Price is per side	205/210/212/214/UH-1	$3,295.00
D205-633-026	***Heli-Access-Step™*** **RH 39" Extended Height Gear** Simplex Tank Compatible	**39" extended height gear. Mounts to fuselage at STA 63 & STA 129. Rated for 500 lb in flight. Simplex Model 304 Fire Attack Tank Compatible.** Price is per side	**205/210/212/214/UH-1**	**$3,295.00**



D204-618-011



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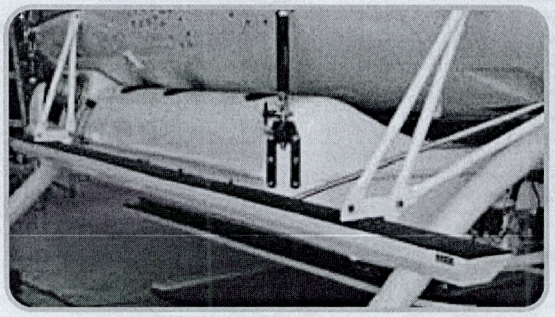
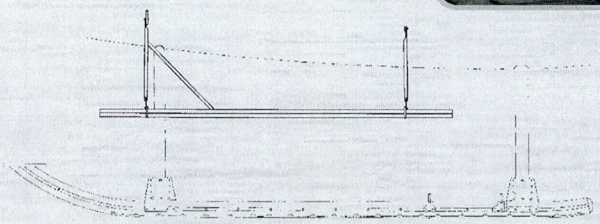
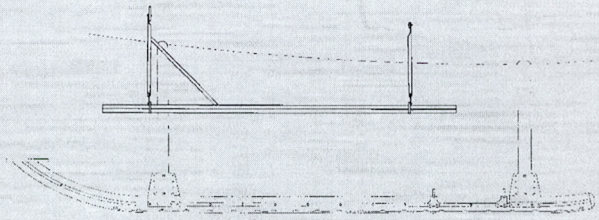


D205-633-021/-022 Compatible with Simplex Water Tank



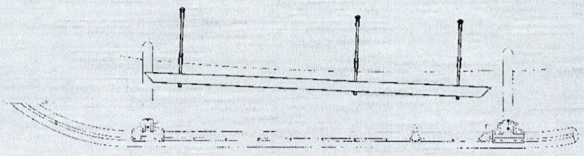
D205-633-021/-022 (standard high gear)
D205-633-023/-024 (fits 31" gear)
D205-633-025/-026 (fits 39" gear)
Compatible with Simplex Tank



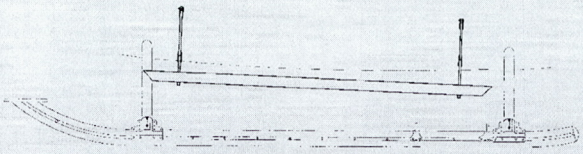
D205-633-015 (fits 39" gear)
D205-633-013 (fits 31" gear)
Compatible with Isolair Tank

Heli-Access-Step™ Bell 204/205/210/212/214/412/UH-1

PART NUMBER	PRODUCT DESCRIPTION	SPECIAL COMMENTS	AIRCRAFT MODEL	PRICE
D412-630-011	***Heli-Access-Step™* LH Heavy Duty, Folding**	**Heavy duty, folding. Mounts to fuselage hardpoints at STA 84.29, STA 129.0 & STA 155.06. Installs on Low & High Gear. Price is per side**	**205/210/212/214/412/UH-1**	**$4,894.00**
D412-630-012	*Heli-Access-Step™* RH Heavy Duty, Folding	Heavy duty, folding. Mounts to fuselage hardpoints at STA 84.29, STA 129.0 & STA 155.06. Installs on Low & High Gear. Price is per side	205/210/212/214/412/UH-1	$4,894.00
D412-630-033	***Heli-Access-Step™* LH Folding**	**Folding. Mounts to fuselage hardpoints at STA 84.29 & STA 155.06. Installs on Low & High Gear. OEM & Apical float compatible. Required equipment for the 614.7601 & 614.7602 Apical Tri-Bag Flotation Systems. (redesign of -023) Price is per side**	**205/210/212/214/412/UH-1**	**$5,439.00**
D412-630-034	*Heli-Access-Step™* RH	Folding. Mounts to fuselage hardpoints at STA 84.29 & STA 155.06. Installs on Low & High Gear. OEM & Apical float compatible. Required equipment for the 614.7601 & 614.7602 Apical Tri-Bag Flotation Systems. (redesign of -024) Price is per side	205/210/212/214/412/UH-1	$5,439.00
D412-630-111	***Heli-Access-Step™* LH Heavy Duty, Fixed**	**Heavy duty, fixed. Mounts to fuselage hardpoints at STA 84.29, STA 129.0 & STA 155.06. Installs on High Gear. Price is per side**	**205/210/212/214/412/UH-1**	**$5,439.00**
D412-630-112	*Heli-Access-Step™* RH	Heavy duty, fixed. Mounts to fuselage hardpoints at STA 84.29, STA 129.0 & STA 155.06 Installs on High Gear. Price is per side	205/210/212/214/412/UH-1	$5,439.00



D412-630-011/-012



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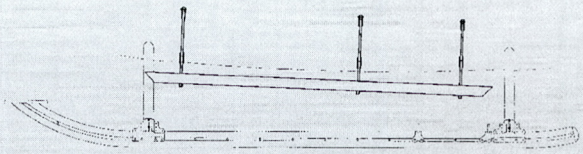

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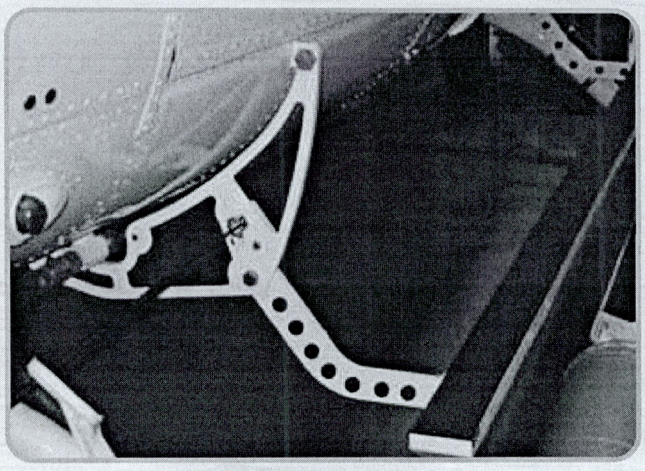


D412-630-033/-034
Float Compatible Step
(OEM & Apical)

DART helicopter services

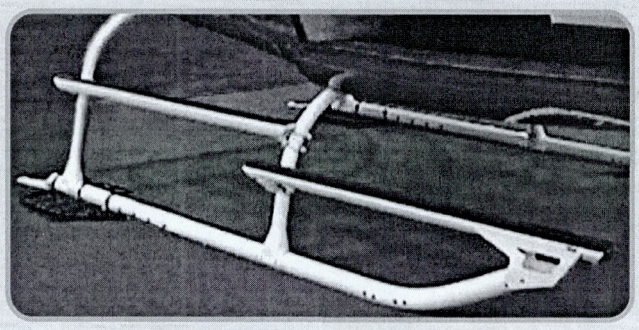
Heli-Access-Step™

AS 350/AS 355

The ***Heli-Access-Steps™*** for the Eurocopter AS 350/AS 355 were designed to suit a number of landing gear configurations and operational needs. These steps are available in a variety of lengths and are compatible with the Air Cruiser or the Aerazur flotation systems.

The steps mount on the forward end of the Skidtube with a sheet metal enclosure and/or to the crosstubes using a reliable, lightweight support/clamping system.

These steps are just the ticket for safe, convenient and quick access. Your first step is to order a set.



D350-591-133 and D350-591-214

Heli-Access-Step™

AS 350/AS 355

Heli-Access-Step™

APPROVAL	STC NUMBER	A/C APPROVED	STC DESCRIPTION
Canada	SH92-6	AS 350B/B1/B2/B3/BA/D/D1/AS 355E/F/F1/F2	*Heli-Access-Step™*
USA	SH967NE	AS 350B/B1/B2/B3/BA/C/D/D1/AS 355E/F/F1/F2/N	*Heli-Access-Step™*
France	157-SI-0930	AS 350 Series	*Heli-Access-Step™*
Germany	RC 1148	AS 350B/B1/B2/B3/BA/AS 355E/F/F1/F2	*Heli-Access-Step™*
Japan	STC-88-TYO	AS 350B/B1/B2/B3/BA/AS 355F/F1/F2	*Heli-Access-Step™*
Brazil	1999S02-01	AS 350B1/B2/B3/BA	*Heli-Access-Step™*
Brazil	1999S02-02	AS 355F/F1/F2/N	*Heli-Access-Step™*
Brazil	1999S02-03	AS 350B	*Heli-Access-Step™*
UK	27937	AS 350 Series	*Heli-Access-Step™*
UK	27938	AS 355 Series	*Heli-Access-Step™*
Eurocopter	350 A 08 4127	AS 350B2	*Heli-Access-Step™*
Canada	SH93-1	AS 350B/B1/B2/B3/BA/C/D/D1/AS 355E/F/F1/F2	Maintenance Step
USA	SR00600NY	AS 350B/B1/B2/B3/BA/C/D/D1/AS 355E/F/F1/F2	Maintenance Step
Canada	SH99-7	AS 350B/B1/B2/B3/BA/C/D/D1 / AS 355E/F/F1/F2	Toe Step
USA	SR00646SE	AS 350B/B1/B2/B3/BA/C/D/D1 / AS 355E/F/F1/F2/N	Toe Step
UK	28081	AS 350B/B1/B2/B3/BA	Toe Step
UK	28082	AS 355F/F1/F2/N	Toe Step

New approvals are continually being added; if you do not see your required approval, contact your DART sales office to verify the status.

PART NUMBER	PRODUCT DESCRIPTION	KIT WEIGHT	INSTALLATION TIME
D350-591-311	*Heli-Access-Step™* LH long step, high gear, Aerazur float compatible	12.00 lb / 5.40 kg	3 hrs
D350-591-312	*Heli-Access-Step™* RH long step, high gear, Aerazur float compatible	12.00 lb / 5.40 kg	3 hrs
D350-591-213	*Heli-Access-Step™* LH short step, high gear, Aerazur float compatible	6.30 lb / 2.88 kg	3 hrs
D350-591-214	*Heli-Access-Step™* RH short step, high gear, Aerazur float compatible	6.30 lb / 2.88 kg	3 hrs
D350-591-215	*Heli-Access-Step™* LH short step, low gear, Aerazur float compatible	5.90 lb / 2.70 kg	3 hrs
D350-591-216	*Heli-Access-Step™* RH short step, low gear, Aerazur float compatible	5.90 lb / 2.70 kg	3 hrs
D350-591-117A	Pre-Flight Step	1.70 lb / 0.77 kg	1 hr
D350-591-133	Aft Maintenance Step	6.80 lb / 3.07 kg	1 hr
D350-615-041	GHW Modification Kit	N/A	1 hr
D350-591-121	*Heli-Access-Step™* LH, short step, high gear, Air Cruiser float compatible	8.00 lb / 3.63 kg	3 hrs
D350-591-122	*Heli-Access-Step™* RH, short step, high gear, Air Cruiser float compatible	8.00 lb / 3.63 kg	3 hrs
D350-591-123	*Heli-Access-Step™* LH, short step, low gear, Air Cruiser float compatible	7.00 lb / 3.17 kg	3 hrs
D350-591-124	*Heli-Access-Step™* RH, short step, low gear, Air Cruiser float compatible	7.00 lb / 3.17 kg	3 hrs
D350-721-045	Maintenance Step	1.00 lb / 0.45 kg	0.5 hrs
D350-721-046	Maintenance Step	1.00 lb / 0.45 kg	0.5 hrs
D350-636-101	Toe Step	1.00 lb / 0.50 kg	1 hrs

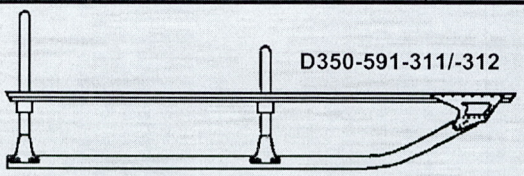
See next page for pricing

DART helicopter services

Heli-Access-Step™

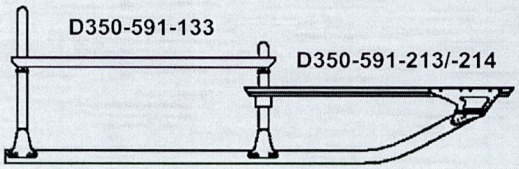
AS 350/AS 355

Heli-Access-Step™				
PART NUMBER	PRODUCT DESCRIPTION	SPECIAL COMMENTS	AIRCRAFT MODEL	PRICE
D350-591-311	***Heli-Access-Step™* LH**	**Long step, high gear. Aerazur float compatible.** Price is per side	**AS 350/AS 355**	**$2,135.00**
D350-591-312	*Heli-Access-Step™* RH	Long step, high gear. Aerazur float compatible. Price is per side	AS 350/AS 355	$2,135.00
D350-591-213	***Heli-Access-Step™* LH**	**Short step, high gear. Aerazur float compatible.** Price is per side	**AS 350/AS 355**	**$1,385.00**
D350-591-214	*Heli-Access-Step™* RH	Short step, high gear. Aerazur float compatible. Price is per side	AS 350/AS 355	$1,385.00
D350-591-215	***Heli-Access-Step™* LH**	**Short step, low gear. Aerazur float compatible.** Price is per side	**AS 350**	**$1,385.00**
D350-591-216	*Heli-Access-Step™* RH	Short step, low gear. Aerazur float compatible. Price is per side	AS 350	$1,385.00
D350-591-117A	**Pre-Flight Step (Fits LH or RH)**	**Installs on Aft crosstube.** Price is per side	**AS 350/AS 355**	**$575.00**
D350-591-133	Aft Maintenance Step (Fits LH or RH)	High gear. Price is per side	AS 350/AS 355	$1,035.00
D350-615-041	**GHW Modification Kit (Fits LH or RH)**	**For improved ground handling with D350-591-311/-312 steps. One kit modifies one set of ground handling wheels.** Price is per side	**AS 350/AS 355**	**$575.00**
D350-591-121	*Heli-Access-Step™* LH	Short step, high gear. Air Cruiser float compatible. Price is per side	AS 350/AS 355	$1,505.00
D350-591-122	***Heli-Access-Step™* RH**	**Short step, high gear. Air Cruiser float compatible.** Price is per side	**AS 350/AS 355**	**$1,505.00**
D350-591-123	*Heli-Access-Step™* LH	Short step, low gear. Air Cruiser float compatible. Price is per side	AS 350	$1,505.00
D350-591-124	***Heli-Access-Step™* RH**	**Short step, low gear. Air Cruiser float compatible.** Price is per side	**AS 350**	**$1,505.00**
D350-721-045	Maintenance Step LH	Install on Aft crosstube. Compatible with D350-721-041/-043 Lightweight Baskets. Price is per side	AS 350/AS 355	$465.00
D350-721-046	**Maintenance Step RH**	**Install on Aft crosstube. Compatible with D350-721-041/-043 Lightweight Baskets.** Price is per side	**AS 350/AS 355**	**$465.00**
D350-636-101	Toe Step	Mounts to Fwd end of skidtube. Recommended accessory for installation with Apical Floats. Compatible with D350-636-011/-012/-013/-014 ***DART*** Skidtubes. Compatible with 20707-100/-200 Apical Steps. Price is per side	AS 350/AS 355	$315.00

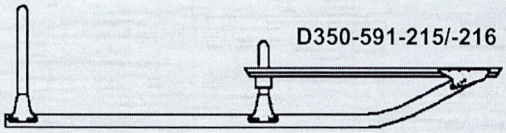


D350-591-311/-312

D350-591-133

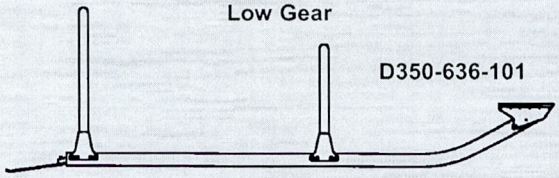


D350-591-213/-214

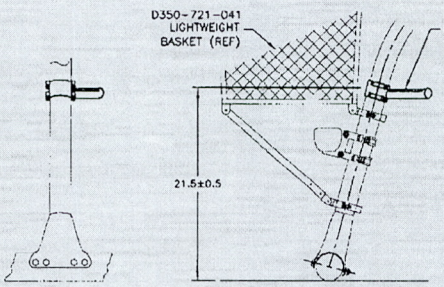


D350-591-215/-216

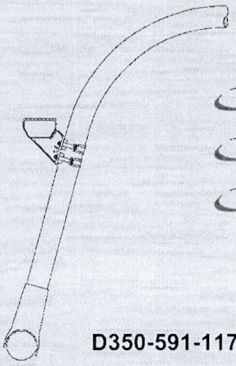
Low Gear



D350-636-101



D350-721-045/-046

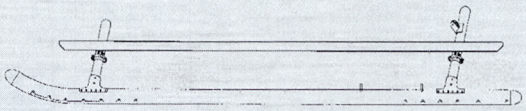


D350-591-117A

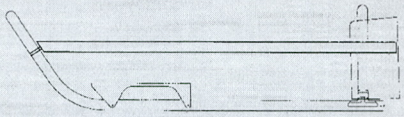
- Easy to install
- Easy to maintain
- Lightweight

FOR CURRENT PRODUCT OFFERINGS VISIT ***WWW.DARTHELICOPTERSERVICES.COM***

Heli-Access-Step™ A119/EC 120



D119-675-011



D120-637-011

Heli-Access-Step™

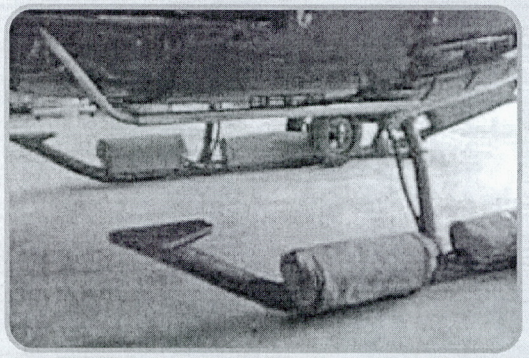
APPROVAL	STC NUMBER	A/C APPROVED	STC DESCRIPTION
Canada	LoA SA5010-A329/SA5012-12	Agusta A119	*Heli-Access-Step™*
USA	SR00948SE	Agusta A119	*Heli-Access-Step™*
Italy	N-CS-021	Agusta A119	*Heli-Access-Step™*

New approvals are continually being added; if you do not see your required approval, contact your DART sales office to verify the status.

PART NUMBER	PRODUCT DESCRIPTION	KIT WEIGHT	INSTALLATION TIME
D119-675-011	*Heli-Access-Step™* LH	11.50 lb / 5.20 kg	2 hrs
D119-675-012	*Heli-Access-Step™* RH	11.50 lb / 5.20 kg	2 hrs
D120-637-011	*Heli-Access-Step™* LH	10.00 lb / 4.54 kg	2 hrs
D120-637-012	*Heli-Access-Step™* RH	10.00 lb / 4.54 kg	2 hrs

PART NUMBER	PRODUCT DESCRIPTION	SPECIAL COMMENTS	AIRCRAFT MODEL	PRICE
D119-675-011	***Heli-Access-Step™* LH**	**Clamps include bearings to prevent over stressing from landing gear displacements. Price is per side**	**A119**	**$1,845.00**
D119-675-012	*Heli-Access-Step™* RH	Clamps include bearings to prevent over stressing from landing gear displacements. Price is per side	A119	$1,845.00
D120-637-011	***Heli-Access-Step™* LH**	**LH. OEM approved Price is per side**	**EC 120**	**$1,845.00**
D120-637-012	*Heli-Access-Step™* RH	RH. OEM approved Price is per side	EC 120	$1,845.00

Step Assembly AS 350/AS 355



The Step Assembly is designed to provide aircrew and passenger access to the helicopter cockpit or cabin. The step supplements the OEM skid toe mounted step and includes a non-skid surface. The Step Assembly is constructed of high quality aluminum which has been anodized to protect it against corrosion. The Step Assembly is mounted high enough that it may be used with any Apical float configuration (Tri Bag Emergency Floats, Single Bag Emergency Floats). The Step Assembly contains the following:

- ***One step assembly***
- ***Attaching brackets***
- ***Attaching hardware***

APICAL

STEP ASSEMBLY

APPROVAL	STC NUMBER	A/C APPROVED	STC DESCRIPTION
USA	SR01156LA	AS 350B/B1/B2/B3/BA/C/D/D1 / AS 355E/F/F1/F2/N	Step Assembly
Canada	P-04-0194	AS 350B/B1/B2/B3/BA/C/D/D1 / AS 355E/F/F1/F2/N	Step Assembly

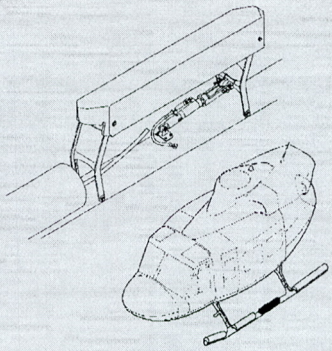
New approvals are continually being added; if you do not see your required approval, contact your DART sales office to verify the status.

PART NUMBER	PRODUCT DESCRIPTION	KIT WEIGHT	INSTALLATION TIME
20707-100 LH -200 RH	Step Assembly	23.00 lb / 10.45 kg	20 hrs

PART NUMBER	PRODUCT DESCRIPTION	SPECIAL COMMENTS	AIRCRAFT MODEL	PRICE
20707-100	**Step Assembly LH**	**Kit includes step attaching brackets and hardware**	**AS 350/AS 355**	**$3,680.00**
20707-200	Step Assembly RH	Kit includes step attaching brackets and hardware	AS 350/AS 355	**$3,680.00**

Step - Electric Step Replacement Pneumatic Actuator

Bell 412



The Step Actuator Release System replaces electrical linear step actuators with pneumatic actuators. This modification is designed to permit the passenger steps to remain in the extended position at all times with the exception of any actual float inflation. During float inflation, nitrogen released from the storage bottle will cause the actuators to retract and allow the passenger steps to free fall or be forced down by the inflating bag.

ELECTRIC STEP REPLACEMENT PNEUMATIC ACTUATOR

APPROVAL	STC NUMBER	A/C APPROVED	STC DESCRIPTION
USA	SR09400RC	412/412EP	Step Actuator Release System

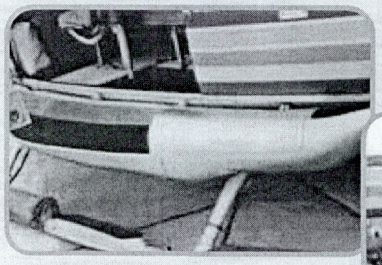
New approvals are continually being added; if you do not see your required approval, contact your DART sales office to verify the status.

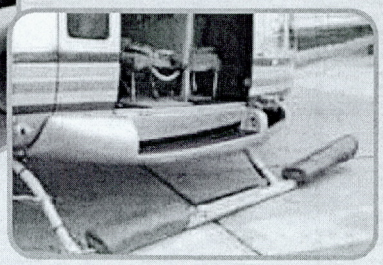
PART NUMBER	PRODUCT DESCRIPTION	KIT WEIGHT	INSTALLATION TIME
41232-1000	Step Actuator	4.00 lb / 1.82 kg	5 hrs

PART NUMBER	PRODUCT DESCRIPTION	SPECIAL COMMENTS	AIRCRAFT MODEL	PRICE
41232-1000	**Step Actuator**	**Completes One Aircraft. Price is per pair, LH & RH** Price is per aircraft, both sides	**412/412EP**	**$3,995.00**

Step - Extended Passenger

Bell 412





The Extended Passenger Step is identical in profile and appearance to the External Auxiliary Fuel System, with the obvious exception that the step portion is lengthened to provide greater step area. Aft of the step is a small items storage locker and available area for mounting side-facing flood lights to illuminate the area surrounding the aircraft for such tasks as emergency medical evacuation scene work.

EXTENDED PASSENGER STEP

APPROVAL	STC NUMBER	A/C APPROVED	STC DESCRIPTION
USA	SH7929SW	412	Extended Passenger Step

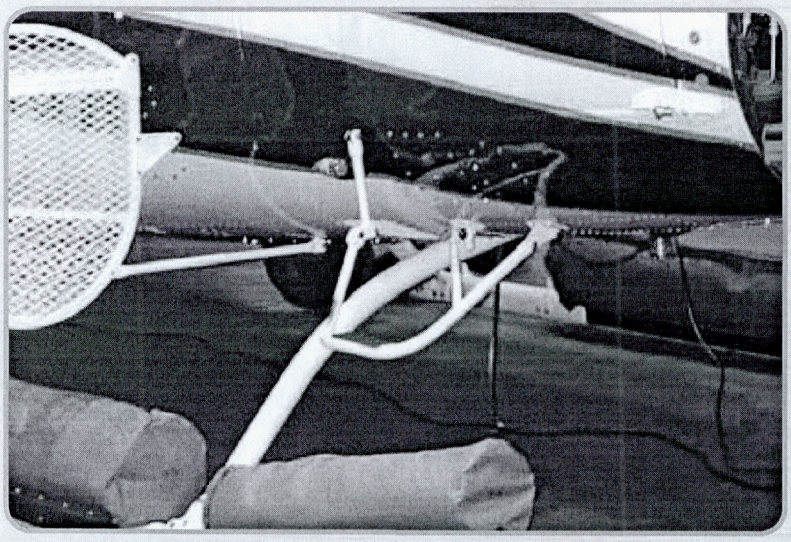
New approvals are continually being added; if you do not see your required approval, contact your DART sales office to verify the status.

PART NUMBER	PRODUCT DESCRIPTION	KIT WEIGHT	INSTALLATION TIME
41252-100-001-001	Extended Passenger Step	164.00 lb / 74.55 kg	8 hrs

PART NUMBER	PRODUCT DESCRIPTION	SPECIAL COMMENTS	AIRCRAFT MODEL	PRICE
41252-100-001-001	**Extended Passenger Step**	**Aft portion of step is storage locker, available area for mounting side facing flood lights** Price is per aircraft, both sides	**412**	**$49,995.00**

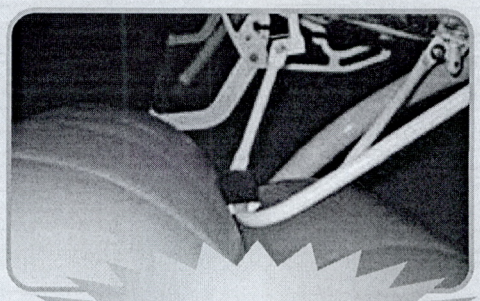
Step - Pilot/Co-Pilot Folding Step

Bell 205/210/212/214/412/UH-1

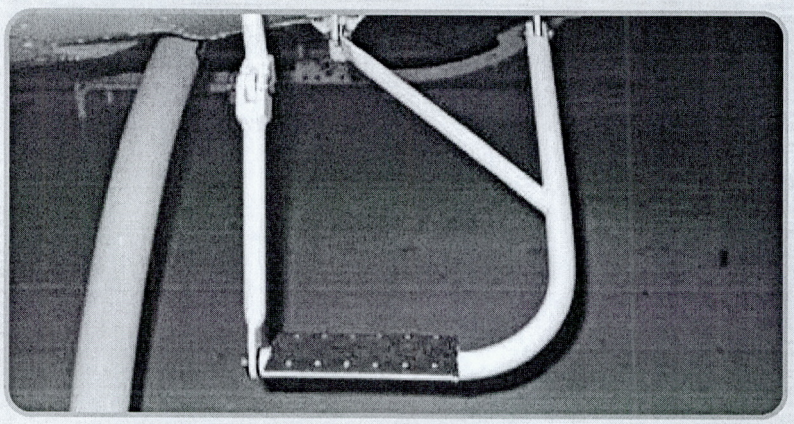


No longer do you have to decide what's the best way to get into the aircraft without pulling a muscle.

Getting in and out of a medium Bell aircraft has always been a stretch for pilots and co-pilots. The new Pilot / Co-Pilot Folding Step eases crew access to the aircraft without compromising long lining capability or interfering with float systems.



Compatible with all D412-630 Steps



PILOT/CO-PILOT FOLDING STEP

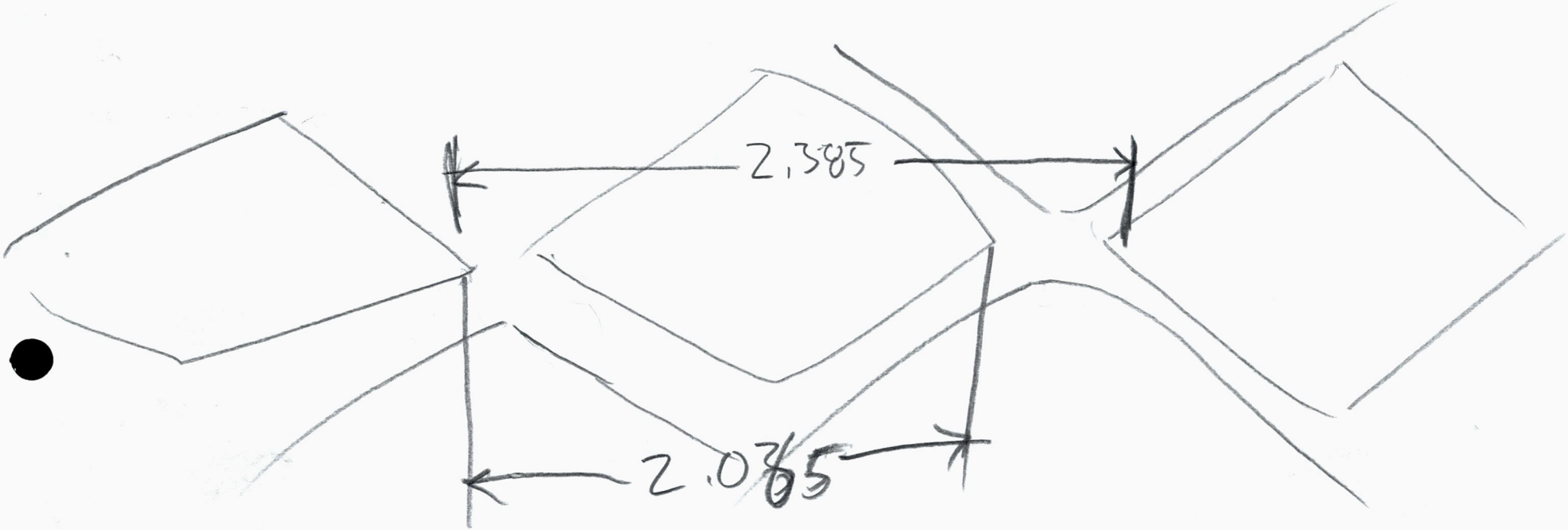
APPROVAL	STC NUMBER	A/C APPROVED	STC DESCRIPTION
Canada	SH96-69	205A/205A1/205B/212/214B/214B1/412/412CF/ 412EP	Pilot/Co-Pilot Folding Step
USA	SR00597NY	214B/214B1	Pilot/Co-Pilot Folding Step
USA	SR00595NY	205A/205A1/205B	Pilot/Co-Pilot Folding Step
USA	SR00598NY	212/412/412CF/412EP/AB412/AB412EP	Pilot/Co-Pilot Folding Step
Japan	STC-112-1-TYO	212/412/412EP	Pilot/Co-Pilot Folding Step
EASA	EASA.IM.R.S.01204	205A/205A1/205B/212/214B/214B1/412/412EP	Pilot/Co-Pilot Folding Step

New approvals are continually being added; if you do not see your required approval, contact your DART sales office to verify the status.

PART NUMBER	PRODUCT DESCRIPTION	KIT WEIGHT	INSTALLATION TIME
D412-630-031	Pilot/Co-Pilot Folding Step LH	7.00 lb / 3.17 kg	4 hrs
D412-630-032	Pilot/Co-Pilot Folding Step RH	7.00 lb / 3.17 kg	4 hrs

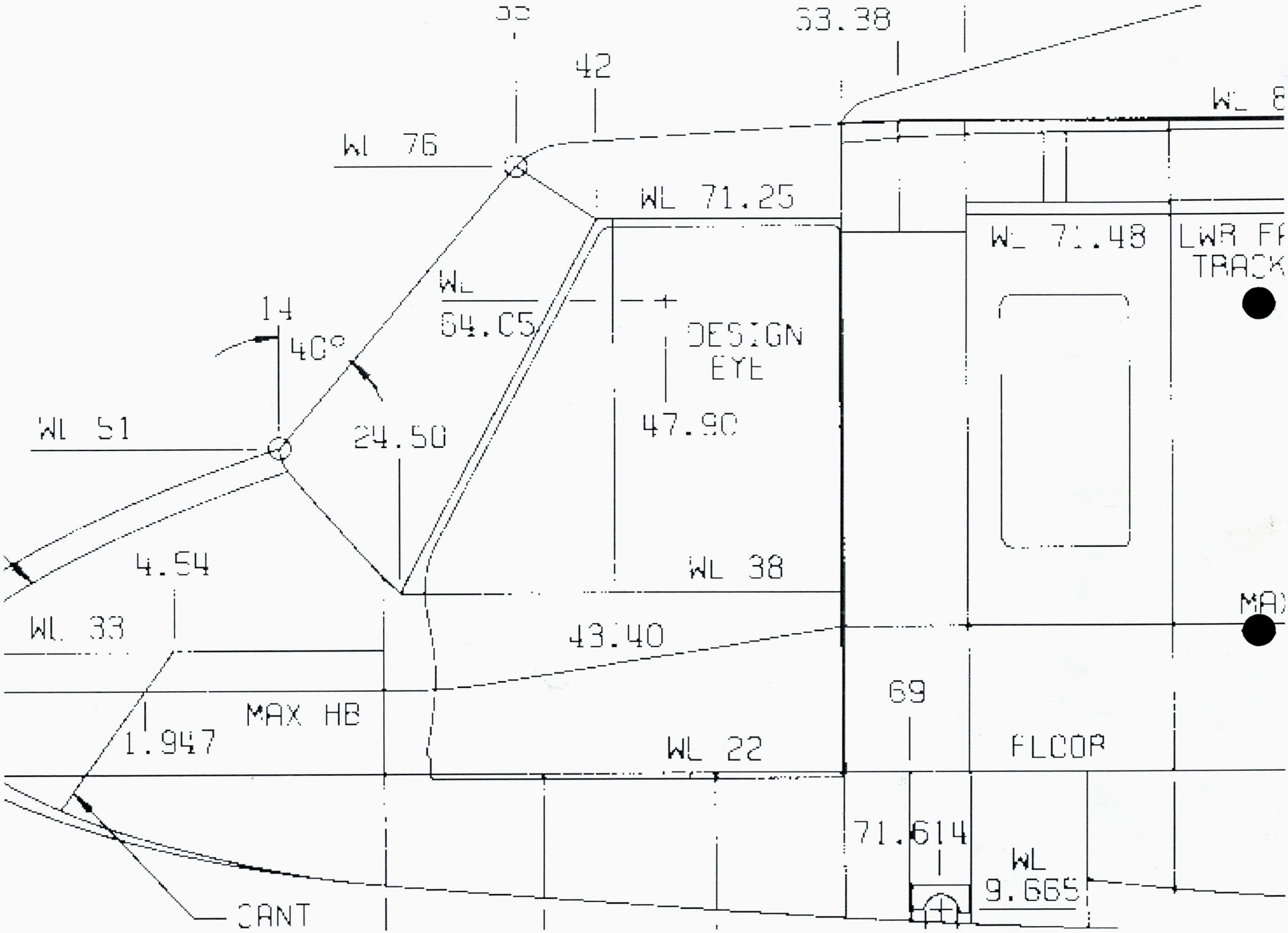
PART NUMBER	PRODUCT DESCRIPTION	SPECIAL COMMENTS	AIRCRAFT MODEL	PRICE
D412-630-031	**Pilot / Co-Pilot Folding Step LH**	**Float compatible, installs at STA 63 & 53.5. Compatible with all D412-630 Steps.**	**205/210/212/214/412/UH-1**	**$1,695.00**
D412-630-032	Pilot / Co-Pilot Folding Step RH	Float compatible, installs at STA 63 & 53.5. Compatible with all D412-630 Steps.	205/210/212/214/412/UH-1	$1,695.00

C-FTGK
65.12
71.614
9.665
BL 50
-11.791
72.448



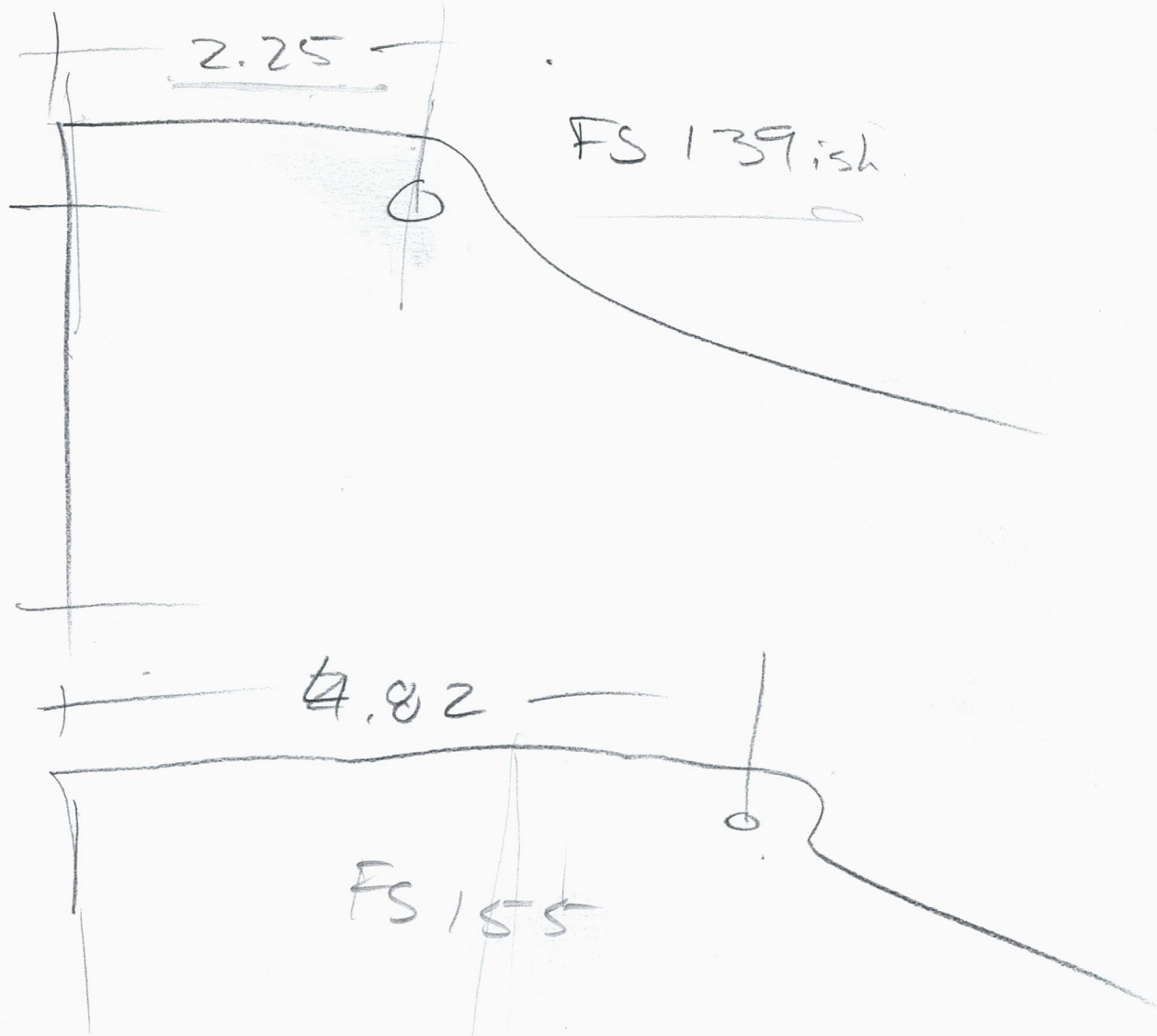
$92\frac{7}{8}$ ℄ to ℄

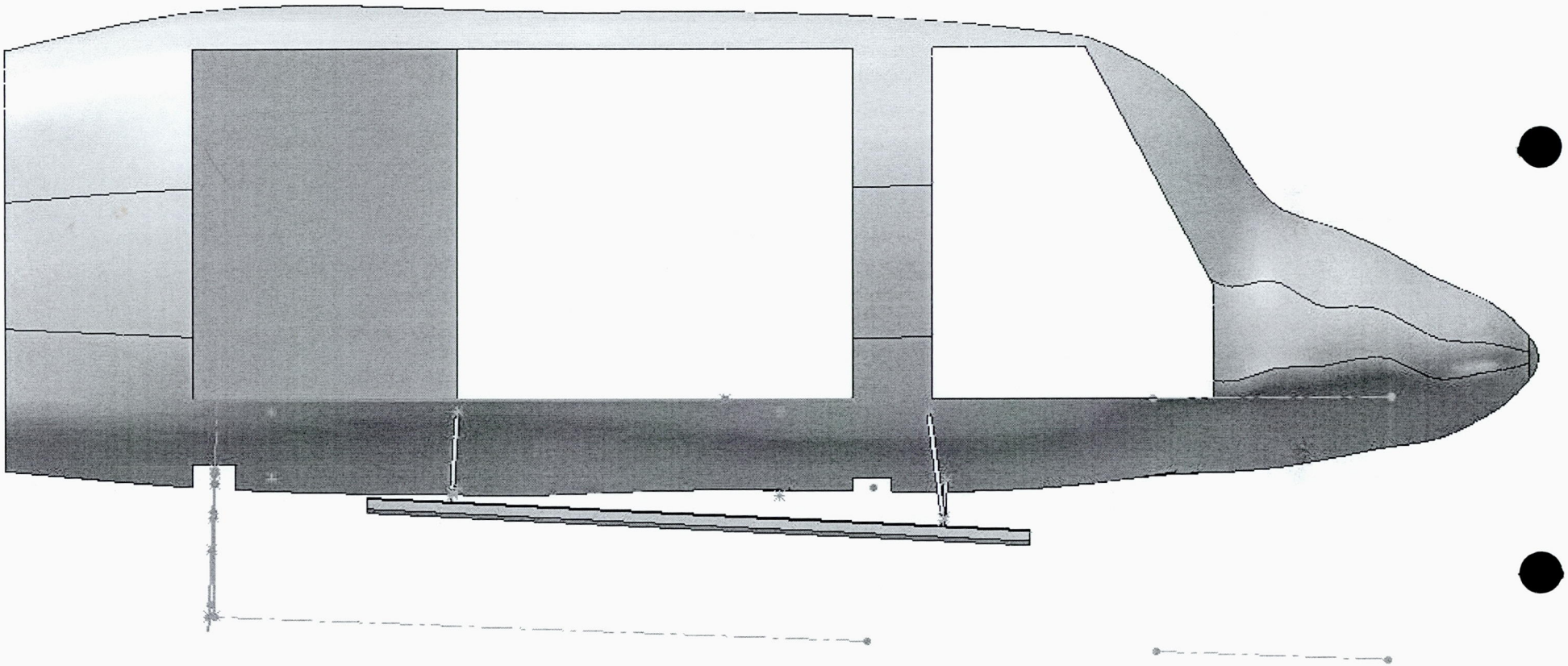
$96\frac{3}{8}$ ℄ to ℄


33.38
42
WL 76
WL 71.25
WL 71.48
LWR FA
TRACK
WL
64.05
14
40°
DESIGN
EYE
47.90
WL 51
24.50
4.54
WL 38
WL 33
43.40
MAX HB
1.947
WL 22
69
FLOOR
71.614
WL
9.665
CANT

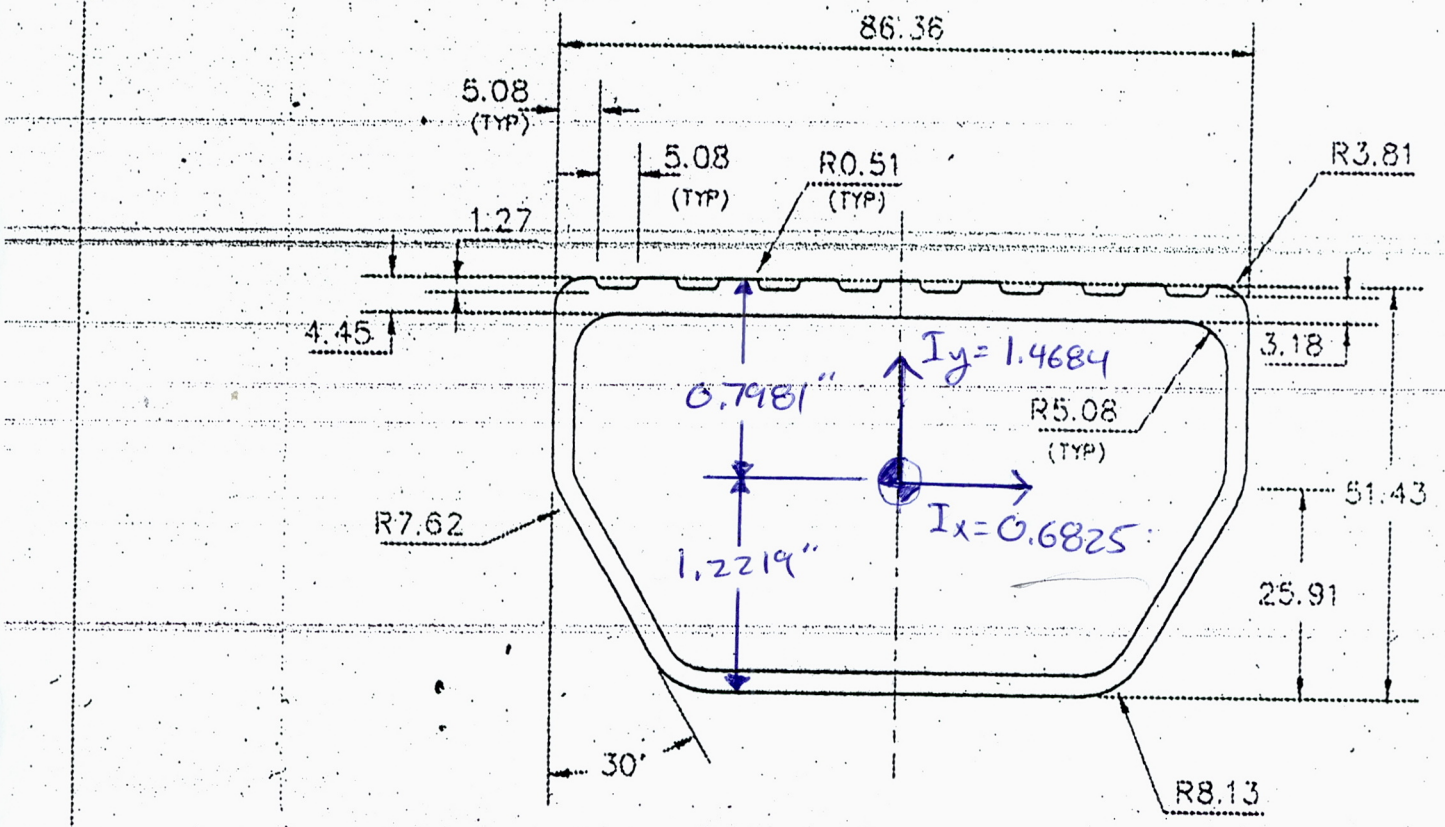
Fwd 75115-01

Aft 75181-01





EXPOSED ALL AROUND



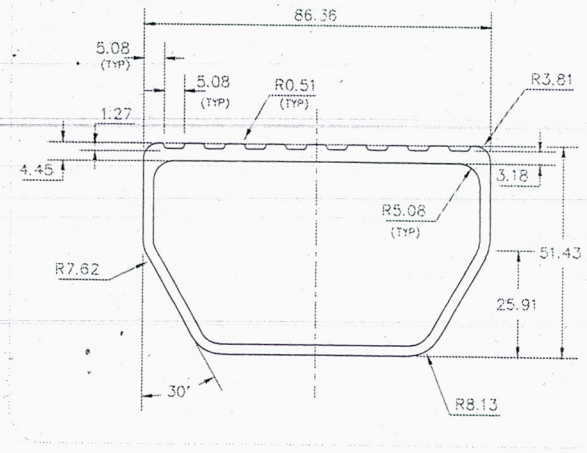
~~ACTUAL SIZE~~

Alloy and Temper Designations

Alloy	Temper	Specified Section or wall thickness (Inches)	Tensile Strength, (ksi)		Yield Strength (0.2 % offset) ksi		Elongation % in 2 in.	Webster Readings
			Min	Max	Min	Max	Min	
6060	T51	up through 0.125	22.0	---	16.0	---	8	9 - 12
		up through 1.000	22.0	30.0	16.0	25.0	8	9 - 12
6060	T61	up through .124	30.0	---	25.0	---	8	11 - 13
		0.125 - 1.000	30.0	---	25.0	---	10	11 - 13
6063	F Will Naturally Age	All	---	19.0	---	---	18	0 - 2
6063	T1 Will Naturally Age	up through 0.500	17.0	---	9.0	---	12	2 - 3
		0.501 - 1.000	16.0	---	8.0	---	12	2 - 3
6063	T4 Will Naturally Age	up through 0.500	19.0	---	10.0	---	14	2 - 5
		0.501 -1.000	18.0	---	9.0	---	14	2 - 4
6063	T5	up through 0.500	22.0	---	16.0	---	8	9 - 12
		0.501 - 1.000	21.0	---	15.0	---	8	9 - 12
6063	T52	up through 1.000	22.0	30.0	16.0	25.0	8	7 - 8
6063	T6	up through 0.124	30.0	---	25.0	---	8	11 - 13
		0.135 - 1.000	30.0	---	25.0	---	10	11 - 13
6063	* T5 511	up through 0.500	22.0	---	16.0	---	9	9 - 12
		0.501 - 1.000	21.0	---	15.0	---	9	9 - 12
6609 (6063)	F Will Naturally Age	All	---	19.0	---	---	18	0 - 2
6609 (6063)	T1 Will Naturally Age	up through 0.500	17.0	---	9.0	---	12	2 - 3
		0.501 - 1.000	16.0	---	8.0	---	12	2 - 3
6609 (6063)	T4 Will Naturally Age	up through 0.500	19.0	---	10.0	---	14	2 - 5
		0.501 -1.000	18.0	---	9.0	---	14	2 - 4
6609 (6063)	T5	up through 0.500	22.0	---	16.0	---	11	9 - 12
		0.501 - 1.000	21.0	---	15.0	---	11	9 - 12
6609 (6063)	T6	up through 0.124	30.0	---	25.0	---	9	11 - 13
		0.135 - 1.000	30.0	---	25.0	---	10	11 - 13
6608 (6063)	T54	up through .500	33.0	---	30.0	---	8	13 - 15
		0.501 - 1.000	33.0	---	30.0	---	10	13 - 15
6005A	T1 Will Naturally Age	up throught .250	25.0	---	14.0	---	15	1 - 7
6005A	T4 Will Naturally Age	up through .250	25.0	---	15.0	---	16	1 - 7
6005A	T5	up through .250	38.0	---	31.0	---	7	13 - 16
6005A	T61	up through .250	38.0	---	35.0	---	8	15 - 16
6061	F Will Naturally Age	All	---	22.0	---	16.0	16	0 - 5
6061	T1 Will Naturally Age	up through 0.625	26.0	---	14.0	---	16	1 - 7
6061	T4 / T4 511	All	26.0	---	16.0	---	16	1 - 7
6061	T5	up through 0.625	35.0	---	30.0	---	8	13 - 16
6061	T6 / T6 511	up through 0.249	38.0	---	35.0	---	8	15 - 17
		0.250 and over	38.0	---	35.0	---	10	15 - 17
6351	T1	up through 0.499	26.0	---	13.0	---	15	1 - 7
6351	T4	up through 0.749	32.0	---	19.0	---	16	1 - 7
6351	T5	up through .249	38.0	---	35.0	---	8	13 - 16
		0.250 and over	38.0	---	35.0	---	10	15 - 17
6351	T6	up through .124	42.0	---	37.0	---	8	15 - 17
		0.125 - 0.749	42.0	---	37.0	---	10	15 - 17

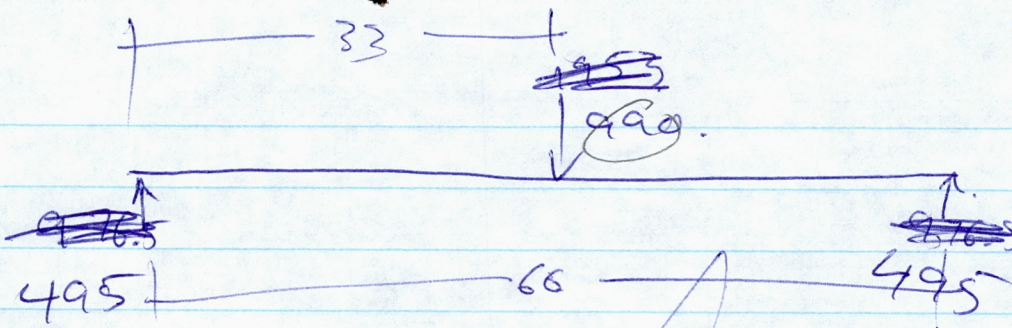
Note : T_ 511 - Stress Relieved Temper (1 to 3 % Permanent Set)
The "511" gives the directive to use "**Minimum Stretch**"
Applies to extruded rod, bar, shapes, and tubes when stretched the indicated amounts after solution heat treatment or after cooling from an elevated temperature shape process. These products may receive minor straightening after stretching to comply with standard tolerances

EXPOSED ALL AROUND



ACTUAL SIZE

Caradon Indalex		PRELIMS ☐ YES ☐ NO	CHECKING GAUGES ☐ YES ☐ NO	LIP RETENTION ☐ YES ☐ NO
		DIE SIZE 10 x 5.5	PRT.	DIE LOC.
WALL THICKNESS 0.100 IN 2.54 MM	EXCEPT AS SHOWN	BACKER SIZE	FEEDER SIZE
EST. AREA 1.122 IN² 723.90 MM²	OUT PER 10.308 IN 261.83 MM	BACKER NO.	FEEDER NO.
EST. WT. 1.346 LBS/FT 1.963 KG/M	FACTOR 14 / 248	BACKER LOC.	FEEDER LOC.
EST. PER 19.188 IN 487.38 MM	O.C.D. 3.487 IN 88.57 MM	BOLSTER NO. C1662	BOLSTER LOC. C9	CAV. 1
DWN BY	ALLOY 6061-T6	SCALE 1:1	DATE 97/9/11	PRESS NO. 2	CONT'D 182	EXT. RATIO 39
BREAK ALL CORNERS .010"R (0.25R) UNLESS OTHERWISE NOTED.		STANDARD TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED	



F = 217.3 lb wt/pers
× 3 pers
× 1.5
= 1953 lb

2.031
− .8
=

16335

16335

$I_x = 0.55$
$c = 1.23$

What ever

$$\frac{32{,}225 \times 1.23}{0.55}$$

$$\frac{16{,}350 \times 1.23}{0.55} = 36.564 \text{ psi}$$

Bob Zeltry
2726
1 780 995 9853

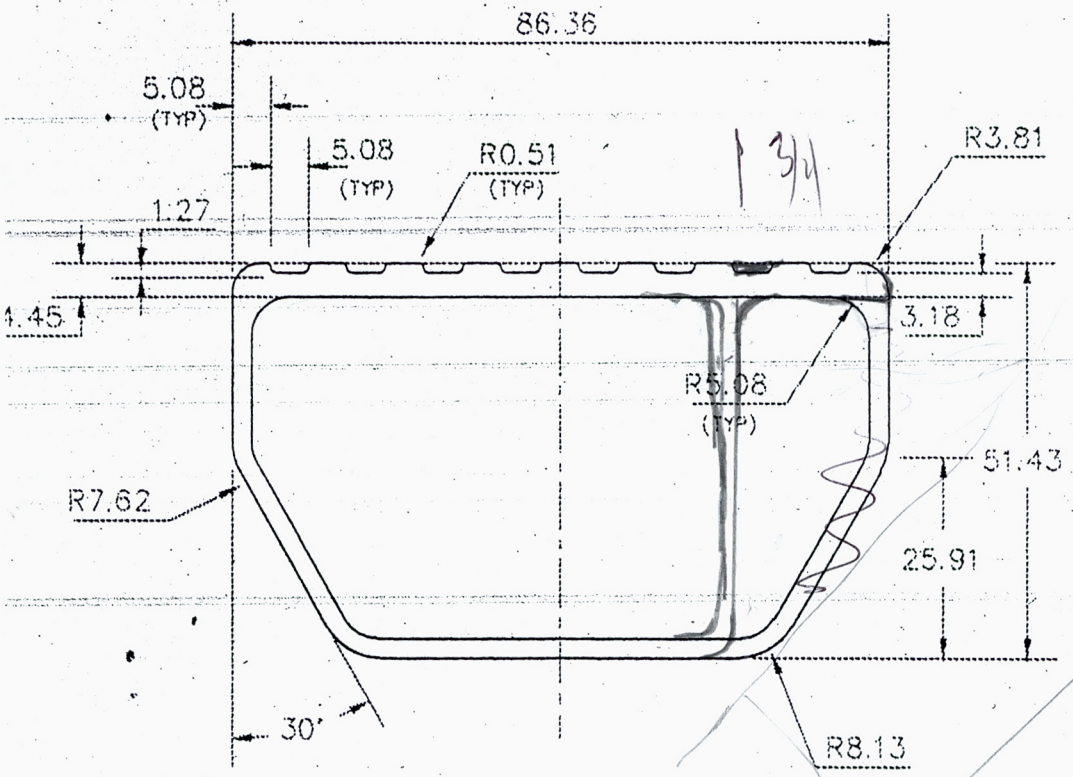
Gateway Aviation
Pat Rasenge

48.52
36.37

45.96
35.54

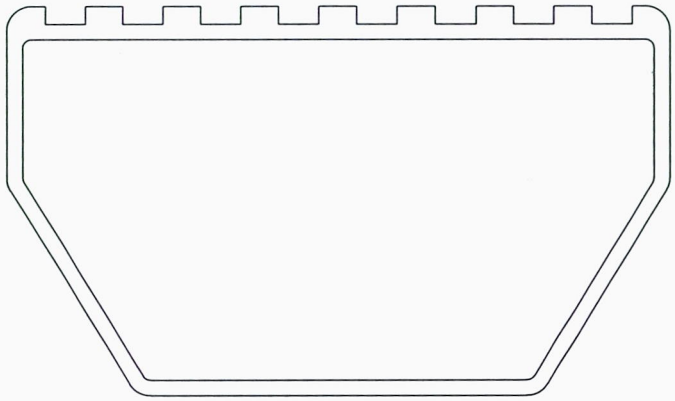
199%

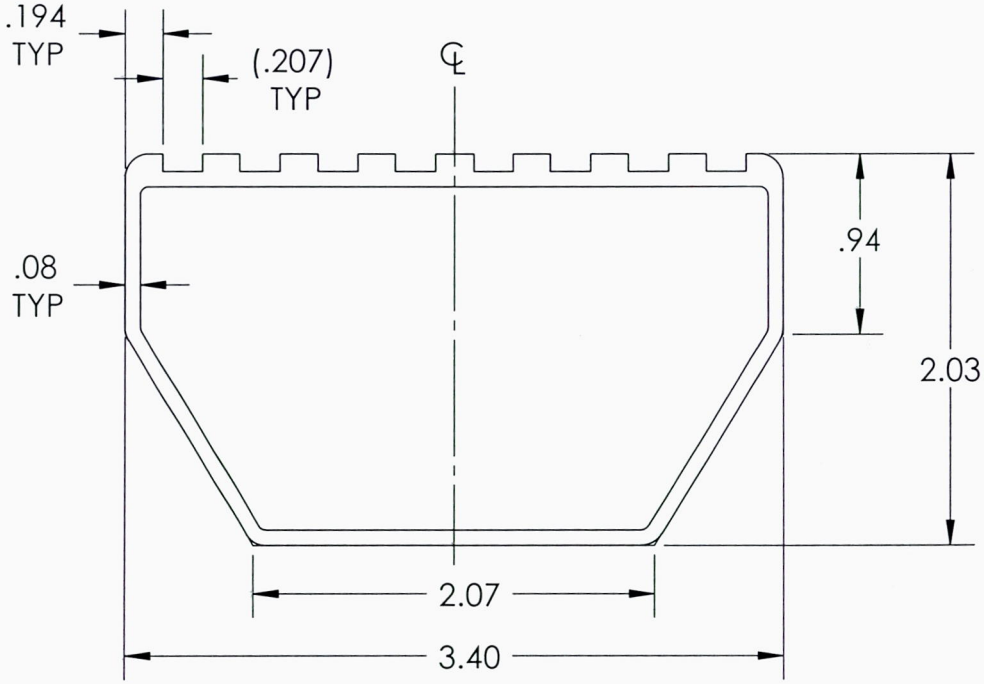
EXPOSED ALL AROUND



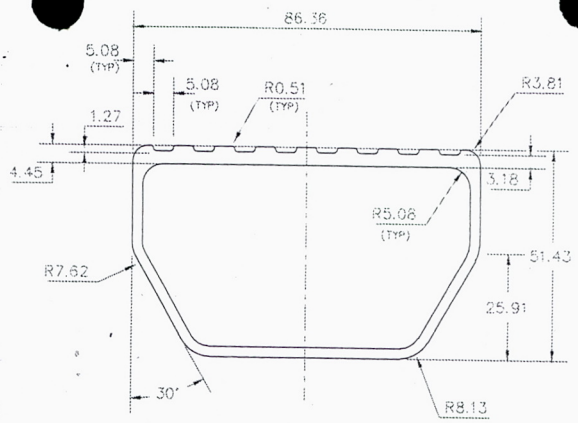
ACTUAL SIZE

radon Indalex	PRELUBE: ☐ WT ☐ PC	CHECKING GAUGE: ☐ YES ☐ NO		LIFT RETURNER: ☐ YES ☐ NO	
	PIE SIZE 10 x 5.5	PKT.		PIE LOC.	
00 IN 2.54 MM	EXCEPT AS SHOWN	BACKER SIZE.		FEEDER SIZE.	
IN² 723.90 MM²	OUT PER. 10.308 IN 261.83 MM	BACKER NO.		FEEDER NO.	
BS/FT. 1.963 KG/M	FACTOR 14 / 248	BACKER LOC.		FEEDER LOC.	
IN 487.38 MM	C.C.D. 3.487 IN 88.57 MM	BOLSTER NO. C1662	BOLSTER LOC. C9		CAV. 1
ALLOY 6061-T6	SCALE 1:1 DATE 97/9/11	PRESS NO 2	CONT'R 188		EXT. RATIO 38
CORNERS .010"R (0.25R) UNLESS OTHERWISE NOTED.		STANDARD TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED			




.194
TYP
(.207)
TYP
℄
.08
TYP
.94
2.03
2.07
3.40

EXPOSED ALL AROUND



ACTUAL SIZE

Caradon Indalex			
WALL THICKNESS 0.100 IN 2.54 MM	EXCEPT AS SHOWN		
EST. AREA 1.122 IN² 723.90 MM²	CUT PER 10.308 IN 261.83 MM		
EST. WT. 1.346 LBS/FT 1.963 KGM	FACTOR 14 / 248		
EST. PER 19.188 IN 487.38 MM	O.D. 3.487 IN 88.57 MM		
DWN BY	ALLOY 6061-T6	SCALE 1:1	DATE 97/9/11
BREAK ALL CORNERS .010"R (0.25R) UNLESS OTHERWISE NOTED.			

STANDARD TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED

6005A

-T61

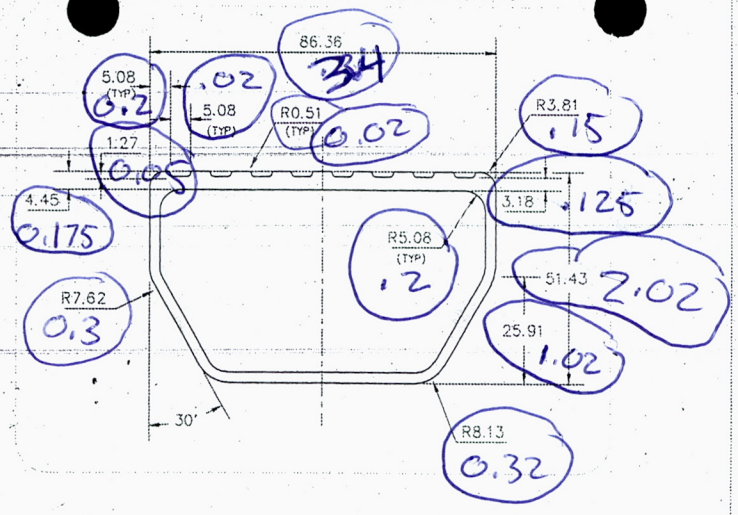
1000F WATER MIST

365°F

~~8~~ 5-8 HRS.

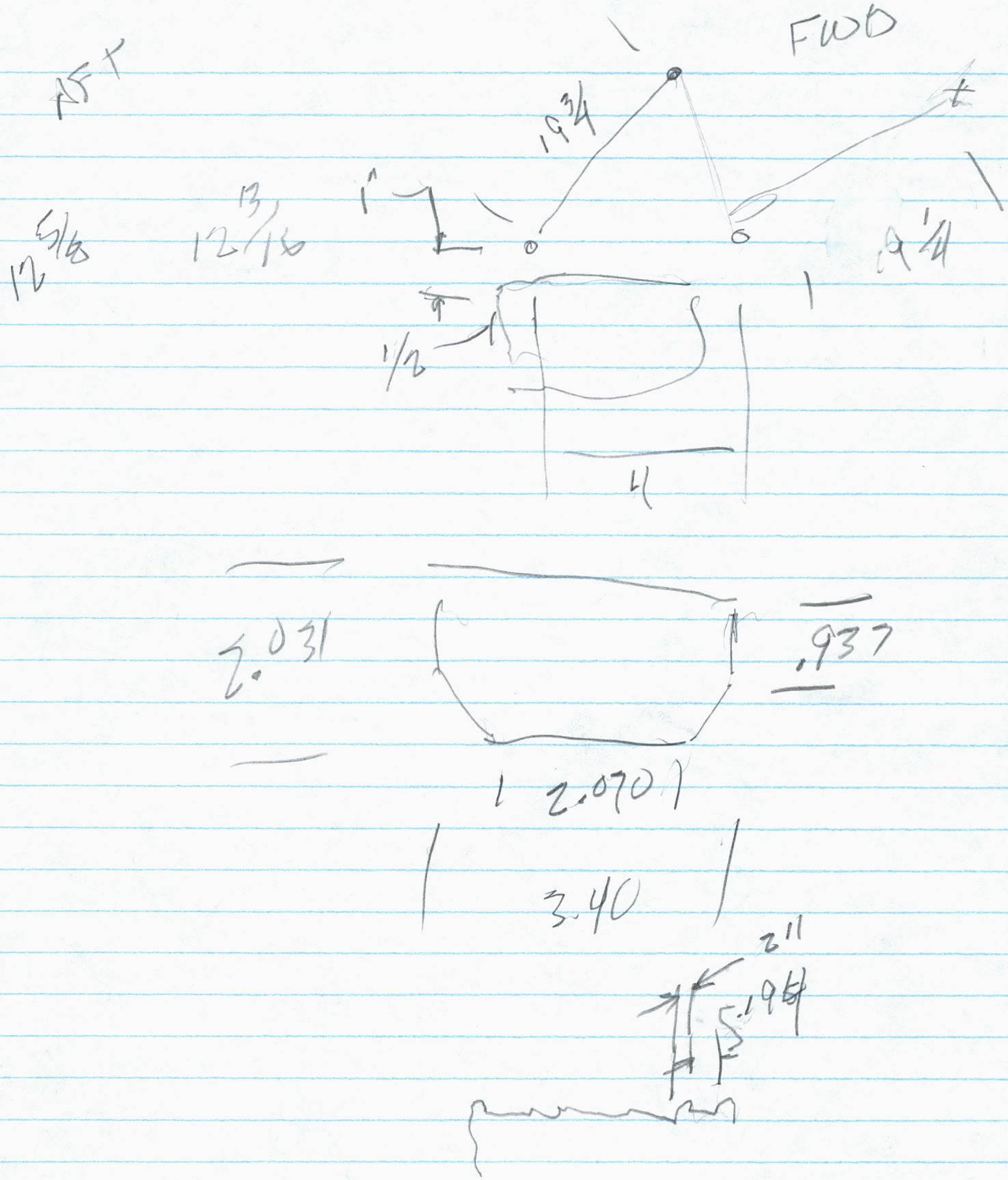
MILL FINISH.

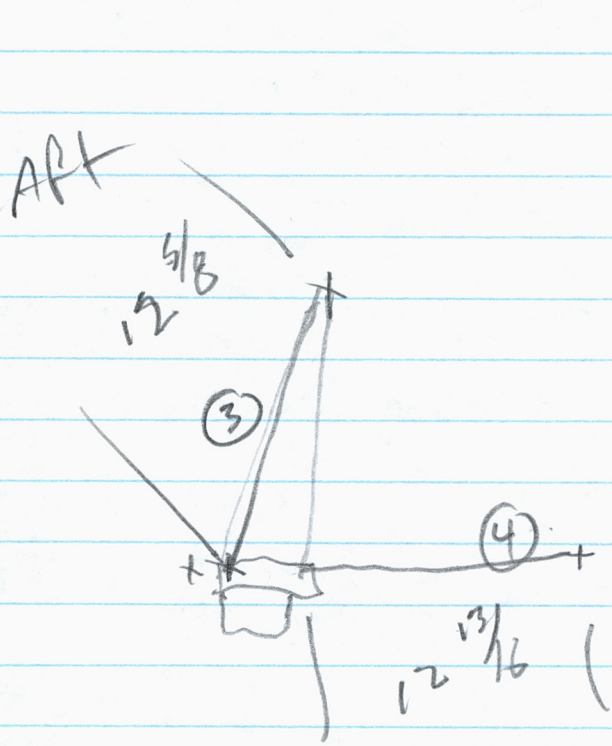
EXPOSED ALL AROUND

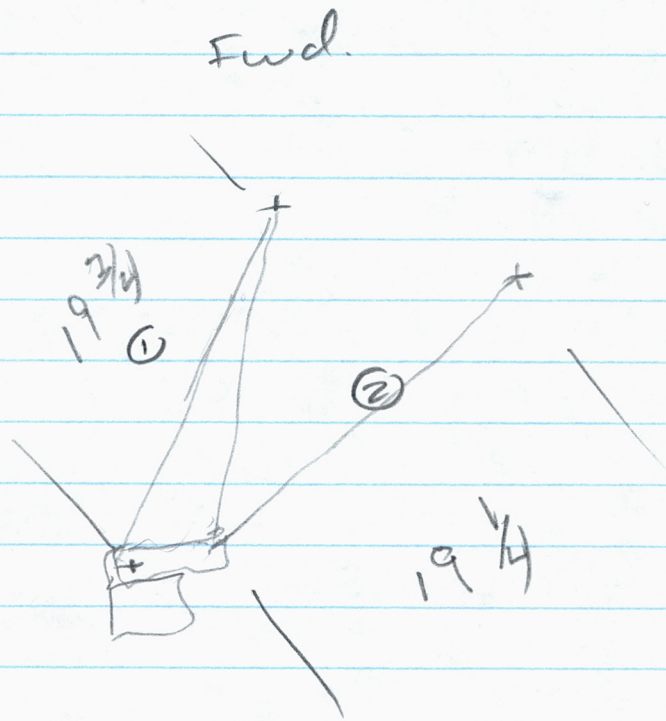


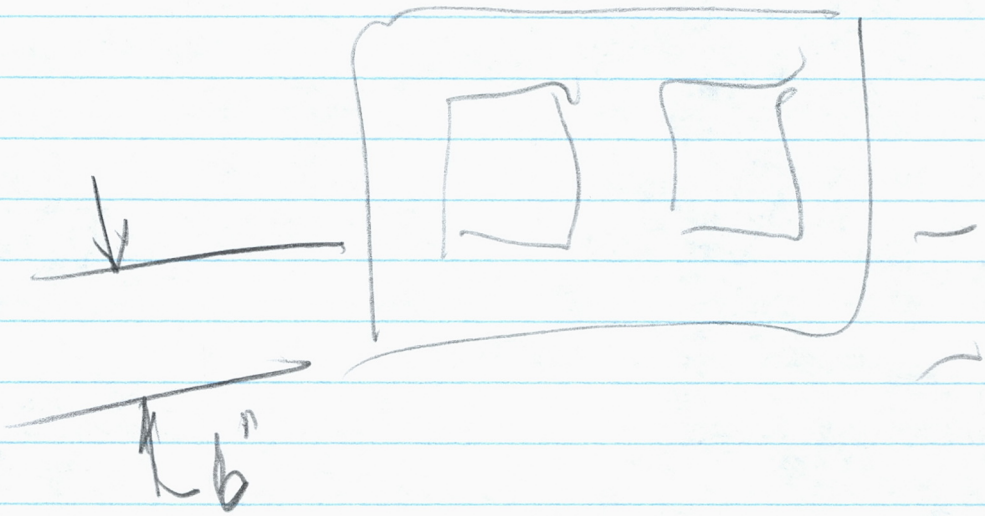
ACTUAL SIZE

Caradon Indalex			PRELIMS: ☐ WT. ☐ PC	CHECKING GAGES: ☐ YES. ☐ NO.	LAP REVISION: ☐ YES ☐ NO
			PIE SIZE: 10 x 5.5	PKT.	DIE LOC.
WALL THICKNESS 0.100 IN 2.54 MM	EXCEPT AS SHOWN		BACKER SIZE.	FEEDER SIZE.	
EST. AREA 1.122 IN² 723.90 MM²	OUT PER 10.308 IN 261.83 MM		BACKER NO.	FEEDER NO.	
EST. WT. 1.346 LBS/FT. 1.963 KG/M	FACTOR 14 / 248		BACKER LOC.	FEEDER LOC.	
EST. PER. 19.188 IN 487.38 MM	C.C.D. 3.487 IN 88.57 MM		BOLSTER NO. C1662	BOLSTER LOC. C9	CAV. 1
DWN BY.	ALLOY 6061-T6	SCALE 1:1	DATE 97/9/11	PRESS NO. 2	CONT'P 188	EXT. RATIO 38
BREAK ALL CORNERS .010"R (0.25R) UNLESS OTHERWISE NOTED.			STANDARD TOLERANCES TO APPLY UNLESS OTHERWISE SPECIFIED		


AFT
FWD
1.94
1.94
12 5/16
12 13/16
1
1/2
4
2.031
.937
2.070
3.40
2"
5.194


Aft
12 5/8
3
4
12 13/16


Fwd.
19 3/4
1
2
19 1/4


6"